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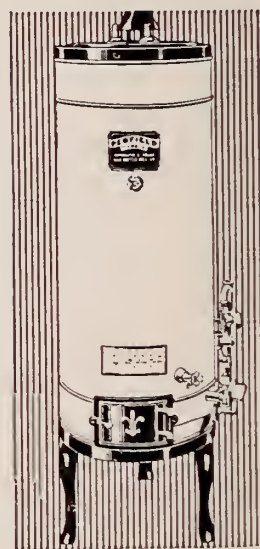
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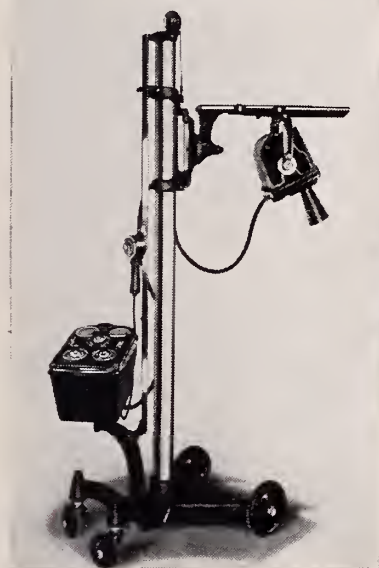


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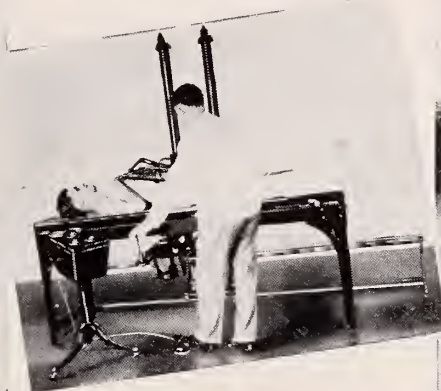
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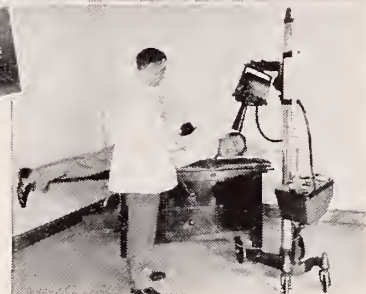
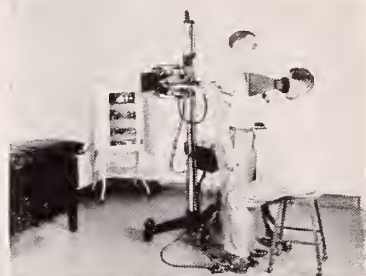
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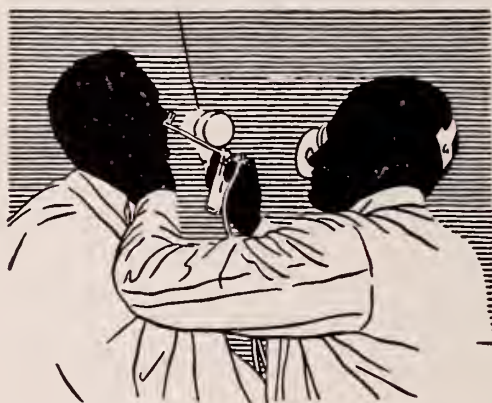
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THE PATHOGENESIS OF IDIOPATHIC ULCERATIVE COLITIS*

Impressions Gained from a Review of One Hundred Cases

HENRY L. BOCKUS, M. D.
Philadelphia, Pa.

In the temperate zone the most frequent cause of chronic diarrhea associated with tormina, tenesmus and the discharge of mucus, pus and blood from the rectum is the syndrome known as idiopathic ulcerative colitis. Pathologically the condition is characterized by an ulcerative, suppurative, necrotizing process, starting in the mucosa of the lower end of the colon for which no constant etiological factor can be discovered. Although the condition is rather rare, it has been my misfortune to study well over 100 cases, and the discussion which follows is based upon this personal experience.

CLASSIFICATION OF CASES BASED UPON CLINICAL TYPES ENCOUNTERED

At the outset it is well to remember that the classical syndrome mentioned above is not invariably present. Diarrhea may be absent and abdominal discomfort may be insignificant or absent, particularly in the early stages and in the mild cases. A few patients are actually constipated during the early attacks. Indeed the passage of blood from the rectum may be the only symptom. Not infrequently sigmoidoscopic evidence of active ulceration in the rectum and sigmoid may be found during a so-called remission of symptoms.

(1) **Chronic Relapsing Type.**—The bowel symptoms may occur in cycles or attacks alternating with periods of freedom from symptoms for long intervals. This common type constituted 70 per cent of my series. The

relapses are prone to occur annually or semi-annually, the early attacks averaging six weeks in duration. There is considerable evidence to suggest that in many instances the attack may be self-limited and independent of the type of therapy employed. Many patients were seen giving a history of relapses and remissions of this type for several years, who have never received any type of so-called specific therapy. In others personally treated, an apparent cure was attributed to some type of vaccine therapy, only to find that a subsequent attack subsided just as promptly when the so-called specific agent was not used. These observations cause me to feel that any claim for a specific etiology based upon relief from a given attack by use of a therapeutic agent is not sound. The frequent tendency for the disease to relapse and remit renders any reported cures short of a five-year follow-up of little value.

In common with peptic ulcer, hemophilia, purpura hemorrhagica and many allergic states, the relapses in ulcerative colitis are frequently seasonal. Forty-two per cent of my cases became active in March and April and 21 per cent had recurrences in October or November. One patient experienced a reactivation of symptoms for six successive years in March before finally merging into a chronic continuous stage of ulcerative colitis. The reason for this seasonal recurrence is not understood. Some have attempted to attribute it to respiratory or other type of infection but many of my cases gave no history of antecedent infection. Perhaps the occurrence of respiratory infection in some cases at the onset may depend upon the same factors of diminished resistance which is responsible for the ulcerative colitis. There may be a seasonal ebb and flow of some type of protective antibodies or a seasonal deficiency of some

*From the University of Pennsylvania Graduate School of Medicine.

*Read before the Medical Society of Delaware, Wilmington, October 8, 1935.

other factor—vitamines or other essential nutritive elements—or a specific sensitivity or state of allergy. Some seasonal change in the bowel pabulum or local devitalization of the bowel mucosa dependent upon mucosal enzyme activity may be responsible. When the mechanism responsible for spontaneous relapses and remissions is understood, a marked advance in the solution of the problem of the etiology and pathogenesis of ulcerative colitis will have been made.

Usually the chronic relapsing type of ulcerative colitis is slowly progressive. The relapses occur more frequently, become more severe and last longer and the inflammatory process extends deeper into the bowel wall and higher up in the colon until eventually the whole bowel may become a semi-necrotic, partially stenosed fibrous tube. However, in some patients the remission may actually constitute a cure. In others sepsis or hemorrhage may cause a fatal termination before the whole colon becomes involved. At any rate during the chronic stage an acute fulminating attack may develop and all therapeutic measures may be futile.

(2) **Chronic "Continuous" Type.**—Eventually many patients with the "intermittent" type of ulcerative colitis fail to go into a remission and must then be classified as cases of "chronic continuous" ulcerative colitis. This stage may continue for many years until the patient finally succumbs to ileostomy, peritonitis, septicemia, severe hemorrhage, or infectious arthritis. During the chronic continuous stage the symptoms and signs may vary considerably from time to time. In some, the subjective complaints may be in abeyance for a time in spite of the continuation of an active ulcerative process as seen through the sigmoidoscope. Although the majority of patients with chronic continuous ulcerative colitis have passed through a period of remissions and relapses for several years, some never experience a remission or become completely quiescent. No obvious cause has been discovered to explain the early tendency toward "continuous" chronicity in some cases, instead of the more common cyclic relapses and remissions. There is no essential difference in the sigmoidoscopic appearance of the bowel between the chronic continuous

type and the active stage of the cyclic variety.

(3) **Acute Fulminating Type.**—This form, fortunately rare, frequently fails to respond to any type of therapy. In many respects the clinical picture is akin to acute bacillary dysentery with negative agglutination tests and failure of recovery of dysentery organisms from the stools. The entire bowel may undergo rapid necrosis before a protective connective tissue barrier can be erected. There are areas of complete mucosal denudation often interspersed with rapidly developing islands of polypoid hyperplasia. Profuse bleeding, fever, sepsis, anemia and death constitute the syndrome in many of the more severe cases. One may logically wonder if this is the same disease due to the same etiological agent. If so, the explanation for the rapid lysis of tissue and complete breakdown of resistance in people of robust health without previous serious illness, awaits solution. Some of the cyclic relapsing cases terminate with this acute septic crisis, with a clinical picture not to be differentiated from the acute fulminating type. I have recently lost three patients with this rapid type of ulcerative colitis—two died within a period of less than two months after the original onset—the third rapidly merged into the fulminating type during a relapse in the fourth year of the disease. In the latter case, the terminal illness was identical with that of the two acute cases. The danger of the development of an acute crisis must always be considered in any patient with ulcerative colitis, regardless of the degree of chronicity. Heroic measures must be considered in all patients who develop a septic temperature for the first time during the course of the disease. A rapid denudation or necrosis of the mucosa or the occurrence of very severe bleeding with rapidly developing polypoid hyperplasia constitute signs of serious import and may indicate the initiation of a rapid crisis and possible early fatal termination.

(4) **Early Healing Type.**—Finally and fortunately, some cases of ulcerative colitis, usually those involving only the rectum and possibly the sigmoid, do respond to therapy or undergo spontaneous healing and remain healed. I have seen very few of these early

cases in their first attack. I should like to emphasize the necessity for careful study of all cases of diarrhea of more than one week's duration. The recognition and treatment of this disease in its early stages offer a much better prognosis and may prevent many patients from developing a chronic incurable type of ulcerative colitis.

DIAGNOSIS

(1) **Sigmoidoscopy.**—A positive diagnosis can only be made by the use of the sigmoidoscope. It is essential in every case presenting the clinical symptoms of ulcerative colitis to eliminate amoebic and bacillary dysentery, new growth in the lower colon, polyposis, mucous colitis, diverticulosis, primary rectal stricture with secondary colitis and bowel tuberculosis. Uncomplicated amoebic colitis, new growth or polyposis of the recto-sigmoid and rectal stricture are easily identified through the sigmoidoscope.

The sigmoidoscopic picture in ulcerative colitis has been divided into four stages by Crohn and Rosenberg: (1) acute or subacute, (2) active chronic, (3) late hypertrophic or granular and (4) polypoid stage. Any classification which assists one in better orientation is useful but none is entirely satisfactory. The above classification is partly clinical and partly pathological and consequently is confusing. Polypoid change may be present in the acute stage and the active chronic stage may not differ in any way from the acute or subacute. The acute phase has been divided by Bouie into four phases: (1) hyperemia, (2) edema, (3) miliary abscesses and (4) miliary ulcers. If previous attacks have occurred the sequence of events during the acute phase of subsequent relapses is not so definite. One seldom sees an acute case at the onset so that the classification of Bouie has proved of more pathological interest than clinical value. The average patient when seen during the acute stage of an original or later attack presents the following features. A patchy film of mucopurulent sanguinous exudate covers the mucosa. After removing this film an angry, reddened and perhaps edematous mucosa is exposed. Multiple pinpoint ulcers are seen in various stages of excavation and healing. Blood usually oozes rather freely from the involved mucosa

wherever it is touched with the instrument or an applicator. There may be areas of confluent ulceration, denuded mucosa, polypoid hyperplasia, granulations or submucosal fibrosis and thickening. The latter features are more common in the cases of longer duration. In the more chronic cases the rectosigmoid may be converted into a narrow, straight, thick tube. When the bowel wall is so deeply involved a permanent cure cannot be expected. The sigmoidoscopic picture is classical and not easily confused with any other condition except bacillary dysentery, from which it cannot be differentiated. Fresh smears obtained through the sigmoidoscope should always be examined for amoeba and cultures planted for isolation of organisms for vaccine therapy and identification of the bacillus of dysentery. Organisms may be required for preparation of vaccine or phage.

(2) **X-Ray.**—Roentgenological study by barium enema is of paramount importance in order to ascertain the extent and the degree of involvement. The classical triad of narrowing, shortening and lack of haustrations in the involved segment is only to be expected in the stage of fibrosis. This triad may be seen occasionally in extreme degrees of functional colonic irritability. However, definite shortening of the colon is exceedingly rare except in advanced ulcerative colitis. In patients who have been observed during repeated relapses and remissions, the classical signs may be seen to extend higher and higher in the colon with each attack. Very few patients are permanently cured when the roentgen signs indicate involvement higher than the splenic flexure of the colon. A study of the mucosal pattern by the combined barium and air injection method is of great value in cases suspected of polypoid hyperplasia. The mottled appearance of diffuse polyposis is often beautifully shown on the film taken after air injection following the expulsion of barium.

It should be remembered that the classical signs mentioned above are dependent usually upon extension of the pathological process into the deeper layers of the bowel wall. They may be absent in cases with involvement confined to the rectum and sigmoid and in the acute fulminating variety of short duration.

In the latter type the colonic margins after barium or air injection may show a fuzzy moth-eaten appearance instead of the well demarcated silhouette seen in the normal bowel. Although the roentgenological investigation is of great value, it is well to bear in mind that negative findings do not rule out the possibility of ulcerative colitis.

ETIOLOGY

(1) **The Type of Individual with Ulcerative Colitis.**—The disease is seen at all ages but occurs more commonly in early adult life. The average age for patients in my series was 31 years. Like diabetes, it seems to be more severe and more intractable to treatment in children and in early adult life. There seems to be no striking sex predilection; our cases were equally divided between the two sexes. The malady may be seen to occur in patients in all stations of life but seems to be a little more common in the dispensary class. The race distribution is of interest. Seven per cent of cases in my series occurred in the negro. The clinical features in this group are of interest. As in many other organic diseases in the negro, the subjective symptoms are not of the severity which might be anticipated from the degree of pathological change. Diarrhea and pain may be inconsequential in moderately severe cases. The negro, however, does not seem to possess the resistance against the inroads of the disease seen in the white race. Continued fever, constant bleeding and early progressive polypoid change was characteristic of many of our colored patients. They did not seem so prone to go into a remission or quiescent stage—the chronic “continuous” variety being more frequent in them. In several colored females I have seen a typical picture of ulcerative colitis develop proximal to a stricture, which probably antedated the colitis. I suspect that the pathogenesis of the disease in the colored may differ from that of the white patient as the clinical behavior seems to be quite dissimilar.

Fifty per cent of my patients were Jews and seven per cent Italians. This represents an increased incidence in these two racial types and suggests the importance of an emotional factor.

The habitus of the individual seems of little consequence. There may be a slight tendency

toward increased frequency in the asthenic individual (41 per cent in my cases).

(2) **Nervous Factor.**—Consideration must be given to the emotional or psychogenic factor in patients with this disease. Emotional upsets and various types of psychic trauma may antedate the onset or precipitate a relapse. In our experience, the Jewish people are more prone to develop ulcerative colitis. Murray, after studying 12 patients, concluded that the outstanding trait in the ulcerative colitis sufferer is fear. He remarked upon their emotional immaturity and their infantile manner in facing problems. Although phlegmatic people are by no means exempt, there can be no disagreement concerning the existence of a highly nervous state in many patients. Whether this is cause or effect is not so easily decided. Even the most phlegmatic patients are apt to become depressed, fearful and anxious after suffering with intractable diarrhea, anemia and abdominal distress for long periods. If there is the added factor of a knowledge of the very serious nature of the ailment or the constant fear of involuntary defecation, it is little wonder that emotional instability is so common. For these reasons the pathogenetic significance of the nervous factor remains problematic.

(3) **Focal Infection.**—A careful anamnesis reveals no incidence of any type of infection common to a large group of cases. A previous history of diseases of accepted streptococcal etiology was not obtained any more frequently than one might anticipate in normal individuals. Likewise there was no noteworthy occurrence of suspected streptococcal invasion in other organs or tissues. Rheumatoid arthritis does develop in some patients but it is usually late in the course of the disease. The frequency of exacerbations of symptoms in ulcerative colitis following respiratory infection or removal of foci of infection was not of sufficient note to be accredited with etiological importance. Even if such relationship did exist, this does not of necessity imply specificity of the existing infection or focus. Any systemic trauma will and does aggravate symptoms in many patients with ulcerative colitis. Foci of infection, particularly dental, upper respiratory and tonsillar, have been considered of great etiologi-

cal significance by some observers. Certainly they cannot be ignored, but we have failed to find foci of infection any more frequently in patients with ulcerative colitis than in others of the same economic and social status without colitis. We have been repeatedly disappointed even in moderately early cases because of failure to bring about a sustained improvement or complete and lasting remission after ridding patients of diseased foci. Our results in these cases in which foci were meticulously removed do not differ materially from other cases in which foci were not given early attention. A review of the historical and clinical data in our group does not support the viewpoint that foci of infection play a primary role in the pathogenesis of ulcerative colitis. However, until further light is thrown on the etiology, obvious foci should be eradicated at an appropriate time, as any factor, capable of contributing toward the devitalization of the sufferer with ulcerative colitis, should be eliminated.

(4) **Specific Organism As Cause of Ulcerative Colitis.**—Almost every organism which has been recovered from the colon has at sometime by some one been accredited with specificity in ulcerative colitis.

(a) *Streptococcus*.—The profession is indebted to J. A. Bargaen for a revival of interest in the etiology of this type of "grave" colitis, during the past decade. Exhaustive investigations carried out under his supervision have convinced Bargaen and his collaborators that this is a disease of bacterial origin and that the primary exciting factor is a lancet-shaped diplostreptococcus. Bargaen has repeatedly described the characteristics of this organism which cannot be reviewed here. His claim for specificity of the diplostreptococcus is based upon: (1) its recovery in 80 per cent of cases; (2) production of ulcerating lesions in the colons of animals following its injection; (3) isolation by blood culture from some patients with severe, fulminating ulcerative colitis; (4) isolation from the heart's blood and from sections of the colon after death; (5) isolation of similar organisms from periapical dental abscesses and tonsillar abscess, cultures from which, when injected, produced ulcerative colitis in animals; (6) agglutination of organisms re-

covered from patients by immune rabbit and horse serums. Bargaen's claims of specificity for the diplostreptococcus in ulcerative colitis, even if disproved, has been responsible for a renewal of interest and initiation of investigations into its etiology; the effect of which is world-wide. Friedenberga, in 1929, working in the Gastro-Intestinal Clinic at the Graduate Hospital, attempted to repeat Bargaen's work. Nine thoroughly characteristic cases of chronic ulcerative colitis were used. Streptococci were recovered in each case, but their cultural characteristics were variable and different and did not conform to Bargaen's criteria for the "diplococcus," although the technique which he recommended was closely followed. A pure diplococcus was finally isolated from strains recovered from 5 patients. None of the original organisms were agglutinated by Bargaen's specific anti-serum. Thirty-nine rabbits were injected with various strengths of cultured organisms and in only two rabbits were colonic ulcerations produced. These resulted from the injection of mixed cultures. Streptococci were recovered from the heart's blood of animals injected with cultures of organisms recovered from 4 patients. These organisms were not agglutinated by Bargaen's serum. Re-injection of these strains did not produce characteristic lesions in animals. Three animals were injected with cultures obtained from Bargaen without the production of colonic lesions.

Walpor, working in the same clinic the following year, isolated streptococci from cultures obtained through the sigmoidoscope in six of seven patients with ulcerative colitis (85 per cent) and in twenty-eight of fifty-nine patients who did not have ulcerative colitis, (49 per cent). He injected 93 rabbits with organisms isolated from the two groups; many of which had the gross characteristic of the diplococcus of Bargaen. There was no essential difference in the cultural behavior of the organisms obtained from the two groups of patients. Bargaen's antiserum failed to cause agglutination of any of these organisms. Lesions attributable to the septicemia following injections of the culture in varying strengths were produced in many animals. The most frequent lesions were tracheitis,

generalized petechiae, swollen mesenteric glands and Peyer's Patches, vascular abnormalities and occasional ulcerations in the ileum and colon. There was no difference in the type of lesion, whether produced by cultures obtained from the patients with ulcerative colitis or from patients with normal colons. Organisms recovered from the heart's blood of 15 injected animals were not agglutinated by Bargaen's serum.

In our clinic, animal inoculations and agglutination tests have failed to establish the specificity of the streptococcus in the etiology of ulcerative colitis. The bacteriological work of Friedenberga and Walpor was supervised by Boerner in whose laboratory at least 75 cases of ulcerative colitis have been studied bacteriologically. Boerner states, "In view of what is known of pleomorphism and mutation and of rough and smooth strains of bacteria, it is difficult to differentiate Bargaen's diplococcus and the streptococcus fecalis. Biological identification of streptococci is admittedly difficult and variable, or the group of streptococci would be adequately classified. In consideration of the serological identifications, it is likely that *B. diplostreptococcus* has the same relationship to the streptococcus fecalis group as does one of the types of Group IV pneumococcus to Group IV. The workers at the Graduate Hospital have followed the exact methods of Bargaen. In only one case has there been an organism obtained which was agglutinated by Bargaen's serum. Many organisms found agree with the biological characteristics of *B. diplostreptococcus* but there has been so much variance that it is likely that the organism described by Bargaen is a type or member of the streptococcus fecalis family."

Paulson has likewise failed to confirm the specificity of Bargaen's diplococcus in ulcerative colitis. Paulson accounts for the frequent recovery of a streptococcus in ulcerative colitis by the fact that blood in the bowel favors the growth of the cocci and inhibits the growth of other bowel organisms.

The improvement reported in many cases following the use of a vaccine prepared from a diplococcus is capable of several interpretations but does not prove specificity of the organism in ulcerative colitis. It has already

been pointed out that the disease is often cyclic, showing a tendency toward clinical relapses and remissions. The improvement in many cases may be natural and independent of therapy. A large series of patients, followed for 5 years with and without vaccine treatment, must be compared before the efficacy of this type of treatment can be determined and arguments for specificity based upon success following treatment seriously considered. In our experience improvement does follow administration of autogenous vaccine in some patients, but it seems entirely independent of the strain of streptococcus recovered. In some instances improvement followed just as promptly in different recurrences, although the strain used in the preparation of the vaccine varied each time.

(b) *B. Dysenteriae*—There is considerable evidence favoring the contention of Hurst, Strauss, Thorlaksen and others that the *B. Dysenteriae* plays an important role in the initiation of chronic ulcerative colitis. The organisms of bacillary dysentery are rarely recovered from the stools in ulcerative colitis. Winkelstein and Herschberger have recently found one of these strains in seven of 60 typical cases. The organism was recovered from only one of our chronic patients (Flexner strain). It should be remembered that culture and serological investigations are seldom carried out early in the initial attack and that organisms soon disappear from the stools in epidemic bacillary dysentery.

Mackie has reported positive agglutination tests from dysentery in 35 of 83 consecutive cases of ulcerative colitis. Winkelstein and Herschberger have reported positive serum agglutination tests from dysentery organisms in 22 per cent of 120 ulcerative colitis patients. Agglutination tests have been performed in forty of our patients and to date we have obtained no positive reactions. However, many of our cases were very chronic and Boerner feels that the agglutinins may disappear from the serum after a number of months.

A bacteriophage potent against one or more strains of dysentery organisms was present in the stools in 15 of 41 cases of ulcerative colitis according to Winkelstein and Herschberger. D'Herelle has likewise recovered

from the stools a bacteriophage sufficient for the strain of *B. dysenteriae* with which the patient is affected. Silverman doubted the specificity of the d'Herelle phage, having found a similar phage in normal stools. He noticed no demonstrable therapeutic effect from the administration of the bacteriophage by mouth and per rectum in several cases in which the *B. dysenteriae* were recovered.

Certain clinical observations suggest bacillary dysentery as a possible etiological factor in cases of so-called idiopathic ulcerative colitis. Silverman in New Orleans feels that many cases of ulcerative colitis are secondary to bacillary dysentery. One of our cases with typical chronic ulcerative colitis and polypoid hyperplasia was seen six months after an attack of acute bacillary dysentery. At the time of onset, a Flexner strain was recovered from the stools and the serum agglutination was positive. Repeated cultures and agglutination tests were negative six months later, when he was first seen by me. Hurst, Crohn and Rosenak and others have noted striking improvement in some patients with ulcerative colitis following the intravenous administration of polyvalent dysentery horse serum. This serum was used in 50 of the author's patients. In two instances the results were striking; a prompt remission of symptoms and signs occurred. In seven others marked improvement seemed related to serum injection. In Crohn's patients most benefit was experienced by those patients who developed severe protein shock. He likewise noted good results in others following the onset of serum sickness. This was noted in several of my cases. One could hardly attribute the benefit obtained from serum to specificity when improvement follows in cases of years duration, with negative bacteriological and immunological findings. Favoring the non-specific action are the result of Schwartzman and Winklesstein with horse serum of high titer against *B. coli* toxins. Fifteen of 21 patients experience striking improvement in from two to six days, which was attributed to the non-specific protein effect or to inroads of secondary infection in these cases with colon strains.

I have been impressed in reviewing the case records of patients acutely ill with ulcerative colitis with the unusual hemograms. In some

of the acute very septic febrile patients the neutrophils remain normal or an actual neutropenia develops in association with an extreme shift to the left. The blood picture is unlike the ordinary acute streptococcal infection and resembles in many respects the response so often seen in bacillary infections.

The organisms of bacillary dysentery must certainly be considered as possible initial invaders in ulcerative colitis. It is impossible clinically to differentiate acute non-specific ulcerative colitis from bacillary dysentery. I feel that every patient with an acute fulminating febrile ulcerative type of colitis should be given antidyentery serum at once before time is lost awaiting laboratory confirmation. Intractable chronic cases may be given the serum, even in the absence of specific agglutinins in the blood, in the hope that it may have some beneficial non-specific effect.

(c) *Other Organisms*—The *B. coli*, *B. Welchii*; gonococci and almost every organism which has been isolated from the colon, have been given consideration in the etiology of ulcerative colitis but to date there is insufficient data to incriminate any specific organism in its etiology. The author has recently seen one patient with intractable ulcerative colitis markedly improve following the use of rectal instillations of phage. The latter was prepared from a hemolytic *B. coli* recovered from his colon in two different laboratories, and from the heart's blood of a rabbit to which it proved rapidly fatal after injections. An isolated experience of this sort proves nothing but does serve to emphasize the importance of a bacterial or infectious factor in the syndrome of ulcerative colitis. Furthermore, it stresses the necessity for utilization of all therapeutic means directed toward combating invasion of colonic bacteria, whether these means be specific or non-specific. I feel, with Mackie, that a variety of organisms may under special conditions initiate the colitis and be responsible in some instances for its continuance.

(d) *Amoebic Colitis*—There is no difficulty in differentiating by sigmoidoscopic examination uncomplicated amoebic colitis from idiopathic ulcerative colitis. Specific therapy in the former disease if used early commonly causes a prompt and complete disappearance

of the ulcers in the colon. After the complete eradication of the amoeba in two of the author's cases, the bowel picture gradually merged into that of a typical non-specific ulcerative colitis. Silverman and others have had similar experiences. It is likely that the amoebic ulcerations permitted organisms normally present in the colon to invade the bowel wall of patients who, for unknown reasons, lacked local or systemic resistance. Although this phenomenon occurs rarely, it serves to emphasize the protean nature of the initiating factors in idiopathic ulcerative colitis and indicates the necessity for keeping an open mind concerning the etiology and pathogenesis of any given case.

(5) **Allergy.**—The occasional development of an acute ulcerative colitis in an individual with some common allergic disorder suggests a state of allergy as the probable cause of the colitis. The colitis in the cases of this type seen by the author has cleared up more rapidly than it does in the ordinary type of non-specific ulcerative colitis. There may be a marked eosinophilia in these patients. Another clinical phenomenon suggestive of a possible allergic factor in ulcerative colitis is the tendency toward seasonal relapses. Mackie reported clinical evidence suggestive of allergy in 77 per cent of 36 patients, in eighteen of which there was suggestive evidence of hypersensitivity of the bowel to certain foods. Cutaneous tests did not parallel clinical evidence in his cases. Andresen recorded evidence of food allergy in 14 of 30 patients with ulcerative colitis and bacterial sensitivity in a number of others.

We have failed to note evidence of food allergy any more frequently in the early stages of ulcerative colitis than in patients with other gastro-intestinal complaints. Many of our cases, particularly the more chronic ones, showed clinical evidences of allergy; such as reacting to vaccine and serum therapy and sensitivity reactions to organisms isolated from the colon. We doubt, however, the specificity of allergy in the pathogenesis of most cases and feel that a state of allergy may be induced by tissue reactions secondary to the disease process. Certainly there is no increased incidence of allergic diseases in the

past medical or family histories of patients with ulcerative colitis.

(6) **Deficiency States.**—Ulcerative colitis is very rarely seen in association with known deficiency states, such as pellagra, beriberi, xerophthalmia, scurvy or rickets. Nevertheless, evidences of mild deficiency disorders in ulcerative colitis have been noted by many observers. Mackie reported some evidence of a deficiency state in 63 per cent of 75 patients. He mentioned the following abnormalities: lingual papillitis, atrophied papillae, oral aphthae, skin lesions like those reported in vitamin A deficiency and pellagra, edema and peripheral neuritis. In his advanced cases roentgen abnormalities of the small bowel were noted, particularly distortion of the mucosal markings and motor delay with dilatation of isolated coils of bowel. Silverman found similar x-ray changes in 27 of 37 patients. Winklestein reported the finding of a deficiency state in 12 of his cases. We have noted a reduction of gastric acidity in 50 per cent of our patients. This could depend upon a lack of utilization of vitamin B₂. Other evidences of deficiency were usually absent in our patients except in those of long duration. The edema which develops in some very chronic cases is dependent usually upon a hypoproteinemia and should be combated promptly with transfusions and a high protein diet. Deficiency states were probably seen more frequently years ago when it was common practice to prescribe a diet deficient in vitamins to all patients with chronic diarrhea. I am in accord with the viewpoint of Winklestein and Silverman that the deficiency phenomena are as a rule secondary. Jones likewise felt that the deficiencies were due to the diarrhea, blood loss, deficient diet, anorexia and vomiting. The lack of normal gastric chymification and the small bowel hypermotility incidental to achylia would contribute toward faulty absorption and certainly predispose toward early deficiency in some cases. The consensus of opinion concedes the existence of deficiency states in many advanced cases but finds that evidence is lacking to support the viewpoint that deficiency plays a primary role in the etiology of ulcerative colitis.

(7) **Hyperthyroidism.**—The high per-

centage of gastric secretory deficiencies, the not infrequent incidence of tachycardia without fever, and the possible benefit to be derived from the administration of iodine in ulcerative colitis is suggestive of a state of hyperthyroidism. I have encountered a mild degree of hyperthyroidism in only one patient. However, metabolic studies were not frequently performed. Clinical evidence indicative of true hyperthyroidism was lacking in our cases, and a review of the literature shows a paucity of reference to the subject.

(8) Vegetative Nervous System Instability.—Vasomotor instability and secretory and motor abnormalities in the gastro-intestinal tract are quite common in patients with ulcerative colitis. These findings suggest the existence of a vegetative imbalance, but it is difficult to decide whether it is cause or effect. The clinical evidence of this type of imbalance may, of course, depend upon sensitivity phenomena which are so common in well established cases. Our experience in 3 cases suggests that there may be more than a casual relationship between vegetative instability and ulcerative colitis in some people. These patients were seen one year or more previous to the onset of ulcerative colitis with a characteristic syndrome of mucous, spastic colitis in an aggravated form. This relationship may be purely incidental. However, not infrequently the sufferer with ulcerative colitis gives a history suggestive of a functional colonic disorder, antedating for years the onset of the grave type of colitis. Haskell and Cantarow reported an increase in the calcium diffusion ratio in mucous colitis and in some patients with ulcerative colitis. Calcium and parathyroid gland proved of therapeutic benefit in some of their cases. A large percentage of our patients received courses of calcium and parathormone but did not seem to improve any more rapidly than other patients upon whom these remedies were not used. In the light of our present knowledge, vegetative instability must be considered to be another conditioning influence but not a primary etiological factor in ulcerative colitis.

SUMMARY

This review adds little to the solution of the problem of the pathogenesis of idiopathic ulcerative colitis. In order that the complexity

of the etiological factors may be appreciated the following cumbersome but clarifying definition for ulcerative colitis is offered: It is a complex syndrome ushered in with a suppurating, ulcerating type of inflammation of the colonic mucosa, with or without a recognizable initiating specific bowel infection, but associated with bacterial or toxic invasion of the bowel wall, conditioned by varying immunologic, allergic and nutritional disturbances and often vegetative and emotional phenomena. Realizing our ignorance of its actual cause, if indeed it is always the same, and the serious prognosis in many instances, the necessity for prompt, thorough, active, individualized management becomes obvious. The author's experience with the disease has convinced him that any plan of treatment based upon the acceptance of a proved etiology is inadequate and doomed to failure only too frequently. An open mind, wholesome respect for the disease, and a knowledge of the multiplicity of contributing factors are essential to rational management.

250 S. 18th St.

DISCUSSION

DR. R. W. TOMLINSON (Wilmington): Mr. President, Dr. Bockus, Fellow Members and Guests: I don't know of anything which has come to me in the two decades and a little more that I have been privileged to be looked upon as a confrere of yours which has brought to me more of pleasure than the opportunity which was accorded to you this afternoon to have address you one of such charming personality and demeanor and with such inherent professional worth as Dr. Bockus. Axiomatic facts roll from his lips, things which must be weighed and must be accepted because of the vastness of his experience. To attempt to praise him would be like a rhapsody of eulogy and I feel I am too menial a dispenser of verbal laudation to attempt it. To those who have been privileged to be enrolled among his student classes, as was allocated to me, we have been constantly impressed by the dynamism of the individual and the ultra exhibition of intense enthusiasm which is a provocative and promulgative factor to the allegiance and interest of those who were his students.

It seems idle to go on in further attempted praise, and I only turn with a grateful heart to express to him my gratitude for the splendid rendition of a difficult topic which was proffered this afternoon.

EATING TO THE BEST ADVANTAGE IN MIGRAINE

EDWARD PODOLSKY, M. D.
Brooklyn, N. Y.

Those who are unfortunate to be the victims of sick headaches or migraine know only too well how miserable life can be. These sick headaches are periodic in their attacks, and last from four to twenty-four hours, during which time the victim is sometimes entirely incapacitated. The pain quite often is severe, at times so severe as to be blinding. There is nausea and vomiting, which further adds to the unpleasantness.

There are several causes for migraine and each must be thoroughly investigated for proper treatment of the disorder. There are also quite a few different remedies which have been used with more or less success. But in the majority of cases of sick headache there seems to be one principal cause: this is the retention of too much water by the body. Because of this fact, diet can go a long way in controlling sick headaches.

Dr. Eugene Foldes has devoted a great deal of time to a study of the proper diet for victims of migraine. He has evolved a diet which he has used with great success in the treatment of many cases of this disease. He has found that by adhering strictly to this diet a great deal of benefit can be had.

The chief characteristics of the migraine diet is the great abundance of proteins, and the restriction of fats and carbohydrates. The reason for this is that proteins encourage the elimination of water from the system, while fats and carbohydrates cause it to be retained. As water-logging of the brain is believed to be the chief cause for the head-splitting headaches, the logic of this diet becomes apparent.

Another important point to remember is that as little water as possible is to be taken by mouth. Too much fluid defeats the purpose of the diet, and gives rise to pains in the head. Salt is also restricted, because salt encourages thirst and the drinking of water. About a pint of water is permitted during the day. In summer when there is much perspiration this quantity may be increased by two or three glasses.

Another thing to remember is that the diet

should be of a low caloric value, as high caloric diets tend to retain water in the body. Also, the diet should not be too high in vitamins.

The following is a sample diet as constructed by Dr. Foldes:

Breakfast—One glass of orange juice, six ounces; 30 grams of toast, with one pat of sweet butter; 1 cup of coffee, preferably a coffee from which most of the caffeine has been removed. One tablespoonful of cream and one teaspoonful of sugar may be added.

Dinner—100 grams of calf's liver, or one hundred grams of lean meat, poultry or fish; salad, such as lettuce, tomato, etc.; 30 grams of bread; 150 grams of raw fruit.

Supper—150 grams of lean meat, poultry or fish; salad and vegetables, containing no more than 17 per cent of carbohydrates; 30 grams of bread; 15 grams of cheese; 150 grams of raw fruit.

After several weeks of the treatment it is usually possible to add from 6 to 150 grams of pastry or pie or cakes. For twenty-four hours, from three to four glasses of water are permitted.

With this diet Dr. Foldes has obtained remarkable improvement in a series of patients with migraine. In some cases all symptoms of the disease disappeared entirely, and in quite a few most of the symptoms disappeared. Of particular interest is that there was great improvement in poor appetite, coated tongue, gas in the stomach, and a sensation of heaviness in the pit of the stomach. Even the most severe cases were benefited in some degree.

There is one thing which must be emphasized in connection with the dietary treatment of migraine—the diet must be persisted in. Dr. Foldes found that if the diet was discontinued or interrupted for a few weeks all the disagreeable symptoms of sick headache returned in full force.

Fortunately there is no monotony in the migraine diet. Most people are fond of meat and meat products, and as a high meat protein diet is very essential for the proper treatment of sick headache there is usually little or no cause for complaint. The greater the protein content of the meat the better the results. Liver, kidney, sweetbread, sardines, etc., are particularly desirable.

A few words about the high protein diet. For many years people have held the erroneous idea that eating a great deal of meat is harmful. Of course this is not true. Dr. Lieb, who kept two Arctic explorers on large quantities of meat for prolonged periods of time, learned some very interesting things about the high meat diet. He found that a high protein diet was not productive of any harmful effects. In fact, the men benefited from this diet. There was a cessation of loss of hair, improvement in the complexion and general health, and quicker and better healing of wounds.

These facts are interesting, particularly to the sufferer from sick headaches. Subsistence on a high protein diet is required and all doubts about its healing qualities should be dispelled. With an improvement in the general health of the sufferer there is also a definite improvement in the specific ailment.

As was already pointed out the anti-migraine diet, while high in protein, is low in fats and carbohydrates. As these two classes of food are known as energy foods, and as a low caloric diet is desirable in case of sick headache this is a logical combination. However, this does not mean that any one who adheres to such a diet is lacking in energy. Proteins furnish more than sufficient energy for most ordinary purposes.

Migraine is but one of quite a few conditions in which it is necessary to restrict the intake of salt. Many who are required to eat a saltless diet complain bitterly of its lack of palatability. This need not be. There are now several salt substitutes on the market which give a satisfactory saline flavor. These are mixtures of saline minerals from which the element sodium has been eliminated, and they may be used quite freely in the diet.

In general the diet as outlined in the preceding paragraphs is of great value in the majority of cases of sick headache. There is another type of sick headache known as allergic migraine which is caused by sensitivity to certain types of food. Any article of food may be responsible, even proteins. Constructing a diet for such a case is a more involved affair.

Here it is necessary to find out just what foods are responsible for the recurrent attacks of sick headache and eliminate them from the diet.

For instance, many people are sensitive to eggs, and eggs alone may be responsible for the headaches. If eggs are eliminated from the diet the headaches cease. Some people are sensitive to meat; others are sensitive to fish, particularly shellfish. Once these articles of food are eliminated from the diet there is usually a very great improvement.

Quite a few people are exceedingly sensitive to foods containing fat in any form. In such cases the gall-bladder is usually found to be diseased. A diseased gall-bladder will always give trouble when fried foods or foods containing fats are eaten. Quite frequently a severe headache will follow after such a meal. In such instances the headaches may be controlled by entirely eliminating fat, and foods fried or seasoned with lard from the diet.

There are also people who are very sensitive to carbohydrates, particularly sugar. Sometimes there is a great craving for sweets just before the attack of sick headache occurs. The complete elimination of sugar from the diet in such cases goes a long way in reducing the severity of the attack as well as its frequency.

There are also quite a few cases of sick headache caused by overeating or over-drinking. In such instances, when no particular article of food is at fault no special diet is required, and all that is necessary is to curb the tendency to eat or drink too much.

The retention of wastes in the system is another frequent cause of migrainous attacks or sick headaches. A diet directed to overcoming constipation and keeping the system free from poisonous wastes will go a long way in overcoming the tendency to sick headaches.

It is now agreed among many physicians that diet control is a very valuable measure in sick headache. There is no specific medicine for this disease, but quite often the victim can do a great deal for himself by following a particular diet.

7119 Nineteenth Avenue.

DELAWARE ACADEMY OF MEDICINE

The Academy announces its scientific meeting program for the first half of 1936, to be held in the Academy building, Gilpin avenue and Union street.

The first speaker will be Dr. Leonard G. Rowntree, director of the Philadelphia Institute of Medical Research, who will lecture January 9 on the pineal and thymus glands with special reference to recent researches. The lecture will be accompanied by motion pictures. Dr. Rowntree was formerly with the Mayo Foundation, Rochester, Minn., and prior to that was associate professor of medicine at Johns Hopkins University.

Dr. George W. Crile, chief of staff of the Cleveland Clinic, an internationally known authority, who has done considerable original work on surgery of the thyroid gland, on shock anesthesia, and kindred subjects, will speak on February 7. His topic will be announced later.

On March 13, Dr. Emil Novak, associate professor of obstetrics at the University of Maryland, and an associate in gynecology at Johns Hopkins University, an international authority on the endocrine system, will speak on the physiology of the female sex cycle.

The clinical pathological conference will continue, as heretofore, at 8:30 p. m., on the fourth Friday in each month, under the direction of Dr. Benjamin Robinson, pathologist, and Dr. Russell Miller, radiologist. Many physicians find these informal meetings among the most interesting and informative held in Wilmington.

The annual meeting of the Academy will be held at 8:30 p. m., on Tuesday, January 28. This is the only regular business meeting of the entire membership and is, therefore, most important. The officers are elected for a period of two years. The present incumbents of these positions were elected last year and therefore the only nominations this year are those to fill the usual vacancies, and for these the Nominating Committee has proposed the following members for membership on the various standing committees: Library committee, W. E. Bird, M. D., five-year term; membership committee, Douglas T. Davidson, M. D., five-year term; scientific committee, Ira Burns, M. D., three-year term; Charles L.

Munson, M. D., five-year term; executive committee, members at large, Roger Murray, M. D., B. M. Allen, M. D.

All members who are at this time delinquent in payment of dues and pledges are especially urged to demonstrate their interest in the Academy and particularly at this time in the scientific committee, by prompt payment of dues. No dues or other moneys will be solicited at the annual meeting. After the business session refreshments will be served.

Etiology of Heart Disease, With Reference to Status of Prevention of Heart Disease

Howard B. Sprague and Paul D. White, Boston (*Journal A. M. A.*, Nov. 2, 1935), state that Cabot attributed the four common types of heart disease to rheumatism, syphilis, hypertension and arteriosclerosis (the status and prevention of which are discussed separately), and these remain the causes of nine-tenths of the organic heart disease of the United States. In the remaining one-tenth are found such diverse types of heart affliction as congenital, thyroid, acute and subacute bacterial, diphtheritic and toxic heart disease, and the damage to the heart produced by pulmonary hypertension, anemia, trauma, systemic disease and neoplasms. While it is true that heart disease is now thought of in terms of etiology as one of the elements of the triad of diagnosis—etiology, structural and functional—one must not be satisfied to confuse knowledge with nomenclature, since it must be admitted that in the four major types of heart disease the pathogenesis is obscure in more than 90 per cent. The causes of rheumatism, hypertension and arteriosclerosis are unproved and in this ignorance of the causes lies to date much of the failure of preventive medicine in heart disease. In the 10 per cent of heart disease with assorted etiology the possibility of prevention depends on the underlying conditions, many of which are remediable; but, except in goitrous districts with an abnormal incidence of thyroid heart disease, not one of these minor groups presents a public health problem of any great importance. On the other hand, the four major groups constitute a preponderant problem since they are responsible for two and a quarter times as many deaths as their nearest rival, cancer.

EDITORIAL

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Local news of possible interest to the medical profession, notes on removals, changes in address, births, deaths and weddings will be gratefully received.

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Keep your copies of THE JOURNAL: it is just possible that the very thing you want to place your hands on later has appeared in this publication. There are three publications that each physician should keep on file—THE DELAWARE STATE MEDICAL JOURNAL, the JOURNAL OF THE A. M. A. and the BULLETIN OF THE A. M. A.

The urge to sue physicians continues, some 35,000 suits having been brought within the past few years. Ninety per cent of these suits had no merit and never got beyond the mere docketing. About seven per cent were won by the profession, and approximately three per cent were lost. This an amazing revelation and should hearten us considerably, but there are three details every physician should attend to: pay his medical society dues promptly and thus be entitled to the medical defense of his society; keep in force his medical indemnity insurance; and conduct his practice so skillfully and circumspectly that no grounds for suit may be found. Even then we will be exposed to the "nuisance suits" brought in an effort to prevent the doctor from collecting a legitimate bill, to provide an ambulance-chasing lawyer with a job, or to provide the improvident with some easy money. The lesson is that he who keeps his house in order need fear no visitor.

The 1936 directory page is published in this issue. Please send us corrections promptly.

WOMAN'S AUXILIARY: A. M. A.

The Woman's Auxiliary of the Medical Society of Delaware held a luncheon and business meeting on December 3, 1935, at the Hob. This was the last business session conducted by the retiring officers. In the absence of the president, Mrs. Joseph McDaniel, who is visiting in Alabama, Mrs. Ira Burns, first vice-president, presided.

The speaker was Mr. Harold V. Maybee, executive director of the Group Hospital Service, Inc., who outlined the plan. A Christmas sketch was presented by Mrs. Sylvester W. Rennie. Mrs. C. E. Wagner was chairman of hospitality.

New officers of the Auxiliary, headed by Mrs. Lawrence J. Jones, of this city, assumed their duties on January 1. The first meeting under that regime will be held in February at the Delaware Academy of Medicine. Other new officers, elected in October, to serve during the ensuing term are: Mrs. Willard E. Smith, Wilmington; Mrs. I. W. Mayerberg, Dover, and Mrs. E. L. Stambaugh, Lewes, vice-presidents; Mrs. Ira Burns, recording secretary; Mrs. Willard F. Preston, treasurer, and Mrs. Sylvester W. Rennie, corresponding secretary.

Monthly sewing meetings have been resumed this year by the Auxiliary, with work being done for the local Visiting Nurse Association. The January meeting will be held at the home of Mrs. J. W. Butler.

OBITUARY

JOSEPH W. BASTIAN, M. D.

Dr. Joseph W. Bastian, veteran member of the staff of the Delaware Hospital, died of septicemia, on December 7, 1935, in the Delaware Hospital, following an illness of about six weeks, at the age of 67.

He had been practicing medicine here for 39 years and had been a member of the Delaware Hospital staff since 1897.

Dr. Bastian was born in Felton, Delaware, December 13, 1868, the son of George M. and Rachel (Brion) Bastian. He was educated at the Felton High School, the Wilmington Commercial College, and the Baltimore Medical College, now the University of Maryland.

He served as coroner's physician for eleven years, from 1900 to 1911, and was chairman

of the Governor's advisory board during the World War. He was surgeon of the Bureau of Fire for several years, his first appointment to this post being made in 1928. He was treasurer of the Delaware Finance Company of this city; vice-president of the Union Improvement Company of Wilmington, and was a member of various branches of the Masonic order and of the Shrine. He also was a member of the Medical Society of Delaware, of which he served one term as president, and a charter member of the New Castle County Medical Society, and served as president of that Society in 1914. He was a member also of the University Club of Wilmington, the Medical Club of Philadelphia, Rotary Club, and the Wilmington and Greenhill Trapshooting Clubs.

Dr. Bastian also served on the Babies' Hospital staff. He was chief of the medical staff of the Delaware Hospital for about 15 years and for the past ten years had been one of the chiefs of the obstetrical department.

He is survived by his wife, Mrs. Evelyn Bastian; a daughter, Ethel, and a son, Joseph, Jr., of Alexander, La. Three sisters and three brothers also survive.

Dr. Bastian was the organizer of the Physicians' Motor Club, of which he had been secretary for the past 20 years. He also designed the emblem that adorns the local physicians' cars.

Funeral services were held at the Yeatman Funeral Home on December 10, 1935. Burial was in the Silverbrook cemetery.

WILLIAM F. HAINES, M. D.

Dr. William F. Haines, aged 73 years, one of the best known and most prominent physicians on the Peninsula, died at his home in Seaford, on November 29, 1935. He was stricken with a heart attack three days previously.

Dr. Haines had practiced his profession in Seaford for nearly 50 years. He graduated from Jefferson Medical College, Philadelphia, in 1888, and came to Seaford the same year. He was President of the W. F. Haines Company, druggists, local registrar for the State Board of Health, and vice-president and a director of the Seaford Trust Company.

Dr. Haines was a member of Hiram Lodge

No. 21, A. F. and A. M. He was a former member of the State Board of Health and a former trustee of Delaware State Hospital at Farnhurst. He served on the staff of John Hunn, when the latter was Governor, nearly 30 years ago.

He is survived by his wife and one son, Dr. Harlan F. Haines, of Upper Darby, Pa.

Burial was in Seaford.

WILLIAM P. ORR

Dr. William Paynter Orr, aged 78, widely-known Lewes physician, president of the Delaware State Board of Health, president of the Sussex Trust Company, died on January 9, 1936, from heart trouble.

Dr. Orr's antecedents have been prominent in Lewes since colonial days. His father, the late William Paynter Orr, was a leading merchant of Lewes. Born in Lewes on March 14, 1857, Dr. Orr received his education in private and public schools of Lewes; at the Pennsylvania Military College, Chester, Pa., and at the United States Military Academy at West Point.

After leaving West Point he matriculated at the University of Pennsylvania, where he received his degree of doctor of medicine in 1884. He then returned to Lewes to take up the practice of medicine, which he pursued for 51 years until ill health last summer caused his confinement.

Dr. Orr was head physician from 1884 to 1894 of the old Marine Hospital at the quarantine station on Cape Henlopen, built during the cholera epidemic for inspection of ships from the East Indies and other points of the world before they were allowed to enter the port of Philadelphia. He was a member of the Board of Pilot Commissioners for many years.

Surviving him are his widow, the former Claudia B. Beck, of Millersville, Pa.; two sons, William Paynter Orr, 3rd, of Wilmington, and Robert Orr, a student at Princeton University; one daughter, Mrs. Laird Eugene Todd, of Salisbury, Md., and one grandchild, Emily Hunter Todd. Also surviving are one brother, Captain Robert H. Orr, U. S. N., retired, of Lewes and Florida, and one sister, Miss Margaret H. Orr, of Philadelphia.

Dr. Orr was an active member, and for

over forty years had been senior warden of St. Peter's P. E. Church at Lewes, where he was buried on January 11th, the services being conducted by Bishop Philip Cook.

The Physical Characteristics of Diathermy and Short Wave Diathermy Machines

In their discussion of the two types of diathermy machines that are used at the present time to produce high frequency electric current which will pass through the tissues producing heat but no neuromuscular stimulation, Allan Hemingway and K. W. Stenstrom, Minneapolis (*Journal A. M. A.*, Nov. 2, 1935), refer to them as the spark gap diathermy machine and the vacuum tube diathermy machine. They assert that the newer method of heat therapy, namely, the short wave diathermy, is at present in an experimental stage. Much valuable research has been done to clarify the problems involved; at the same time there are in the literature some very confusing and misleading statements in regard to the merits of this form of therapy. For a good critical discussion they would recommend the recent article by Mortimer and Osborne. In particular, they would recommend that, owing to the lack of knowledge on many phases of this work and the indications of dangerous possibilities, the newer machines be used with the utmost caution. On the other hand, conventional diathermy is an old established form of therapy about which much is known that has proved to be of definite clinical value.

BOOK REVIEWS

An Introduction to Medical Economics. By the Bureau of Medical Economics, A. M. A. Pp. 108. Paper. Price, 15 cents. Chicago: American Medical Association, 1935.

This little brochure presents a differentiation between the economies of business, industry and commerce on the one hand, and the practically new subject of the economies of the practice of medicine on the other hand. It is intended to be used by study groups of practicing physicians, and by students in medical colleges. A work of such brevity must necessarily be elementary, but the six chapters in this introduction give an excep-

tional groundwork for the collateral reading which is recommended. This is an official, conservative outline of the subject that should be read by every physician.

Handbook on the Subject of the High School Debate Question. Pp. 48. Paper. St. Paul: Minnesota State Medical Association, 1935.

The Minnesota profession should be proud of its leaders, who are among the most alert in the country. The publication of their Handbook is another evidence of this. The pamphlet quotes from some 34 sources, the leading article being that of Richard E. Scammon, Ph. D., on "What is Guild Medicine?" The Handbook is something of a *multum in parvo*, and offers many arguments for the negative side of the high school debate on the subject: "Resolved, that the several states should enact legislation providing for a system of complete medical service available to all citizens at public expense."

Complete Handbook on State Medicine. Compiled by J. Weston Walch. Pp. 158. Paper. Price \$2.50. Portland, Maine: Debaters' Information Bureau, 1935.

This is one of the several handbooks for use in preparing arguments on the high school debate mentioned in the preceding review. A very large amount of work has evidently been done to make this manual live up to its name, "complete," and it is our opinion that it approximates this. The arrangement is unusual but excellent. For once, the doctor's ideas (negative) get as much space and valuation as the affirmative. All in all, we consider this the best handbook on this winter's debate that we have seen.

Medical Jurisprudence. Edited by Benjamin Werne, S. J. D. Pp. 150. Paper. Price, \$1.50. New York: Current Legal Thought, Inc., 1935.

This is the October, 1935 issue of the monthly *Current Legal Thought*, and is devoted to selected abstracts of medico-legal papers, some 32 authors being included. In no sense a textbook on medical jurisprudence, the volume does contain much valuable material, which will, naturally, appeal more to the legal practitioner rather than to the medical one. The material would be much more acceptable to the medical reader if it contained an index.

Russell A. Hibbs. Pioneer in Orthopedic Surgery: 1869-1932. By George M. Goodwin. Pp. 136. Cloth. Price, \$2.00. New York: Columbia University Press, 1935.

Rarely does one come upon a biographical sketch so intriguing as this one, which tells of the life of one of America's great medical men, and in which the old, old story of jealousy, belated opportunities, medical society politics, etc., is found again. The author evidently knew his man pretty well, and has written with both admiration and restraint. This is a volume you—if you care for medical history—will enjoy as much as we did.

Rockefeller Foundation: International Health Division—Annual Report for 1934. Pp. 235, with 22 illustrations. Paper. New York: Rockefeller Foundation, 1935.

This latest report of the health activities of the Rockefeller Foundation, in common with its predecessors, features its major objectives: yellow fever, malaria, and hookworm disease. It also includes a report on its grants to state and local health services and to public health education, and concludes with a financial summary from 1913 to 1934 which shows the impressive sum of \$54,000,000 spent on its health activities. Of this sum, Delaware has received \$1,500 for its public health laboratory: evidently the Rockefellers do not intend to poach on the du Pont preserves.

Proceedings of the 29th Annual Convention of the Association of Life Insurance Presidents. Pp. 220. Paper. New York: Association of Life Insurance Presidents, 1935.

This report contains fourteen addresses on the general subject of the stewardship of life insurance, the chief medical interest centering in the address of Dr. Chester T. Brown, medical director of the Prudential, on Mortality Trends and Health Triumphs.

Catalog of Surgical Instruments—Kny-Scheerer Corporation. 24th Edition. Pp. 511. New York: King-Scheerer Corporation, 1935.

This handsome volume, with its excellent illustrations, represents the acme of the art of cataloguing surgical instruments and similar equipment, and is, in fact, a most valuable reference book on this subject. Its general appearance and its unusually complete contents mark it as one of the few catalogs that will be honored with shelf space until its successor comes along. Every hospital, and most surgeons, will be glad to have it.

1789—MEDICAL SOCIETY OF DELAWARE—1936

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REQUIRED BY THE ACT OF CONGRESS OF AUG. 24, 1912
Of the Delaware State Medical Journal, Published Monthly
at Wilmington, Delaware, for October 1st, 1935

STATE OF DELAWARE
COUNTY OF NEW CASTLE } ss.

Before me, a Notary Public in and for the State and County aforesaid, personally appeared M. A. Tarumianz, M. D., who having been duly sworn according to law, deposes and says that he is the Business Manager and Associate Editor of the Delaware State Medical Journal, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Name of—

Post Office Address—

Publisher, Medical Society of Delaware, Wilmington, Del.

Editor, W. Edwin Bird, M. D., Du Pont Bldg., Wilmington, Del.

Associate Managing Editors, M. A. Tarumianz, M. D., Farnhurst, Del., and Dr. W. H. Speer, 917 Washington St., Wilmington, Del.

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The Medical Society of Delaware.

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M. A. TARUMIANZ, M. D.

Sworn to and subscribed before me this 1st day of January, 1936.

(Seal)

WILLIAM BLACK,
Notary Public.

(My commission expires July 26, 1938)

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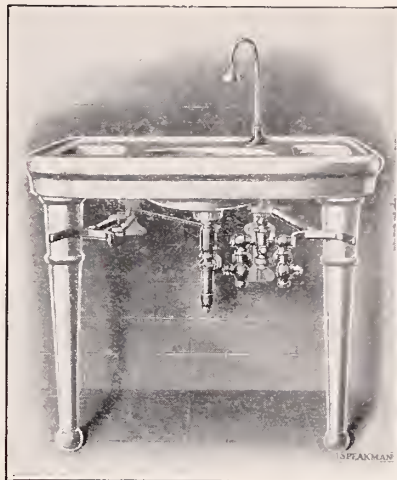
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INCORPORATED 1789

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FEBRUARY, 1936

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CANNED FOODS AND THE PUBLIC HEALTH

I. The "Ptomaines"

• Many requests received for further information on canned foods have inquired as to some of the public health aspects of this class of foods. We appreciate the frank interest of our readers in this subject about which so much misinformation exists. We are glad, therefore, to devote this discussion, as well as subsequent ones, to the most popular of the lay misconceptions concerning the wholesomeness of commercially canned foods.

Some laymen hold the belief that canned foods, in some mysterious manner, develop "deadly ptomaines" within the can and hence the consumer of such foods stands in danger of "ptomaine poisoning". In the light of modern knowledge, this belief is ludicrous; it probably had its origin in the old "ptomaine theory" of food poisoning, now so thoroughly discredited by modern medical authorities (1).

Between the years 1870 and 1880, a large number of substances were obtained from protein material which had undergone bacterial putrefaction. These substances were aptly called "ptomaines", from the Greek "ptoma" or "dead body". Toxicologists of the day ascribed marked toxic properties to the new found ptomaines, chiefly by injection studies rather than by feeding tests.

The science of bacteriology was then in

its infancy—the true causes of food infection or intoxications were not known. Consequently, the discovery of ptomaines, with their alleged toxic properties, permitted the convenient diagnosis of "ptomaine poisoning" for all illnesses following the ingestion of foods. Today, we know that such illnesses usually result from the ingestion of food which had been infected by certain bacterial groups, and not from protein degeneration products such as ptomaines (2, 3).

One authority has stated that "ptomaine poisoning is a good term to forget" (4).

To this we might add that it would also be well to discard the old, unfounded belief that foods in the tin can develop substances hazardous to health.

Canned foods are merely selected foods which, after proper preparation, are sealed in hermetic tin containers and given a heat process calculated to destroy pathogenic and spoilage organisms which might be present on the raw foodstuff. The hermetic seal prevents future infection of the food by such organisms and insures its preservation and wholesomeness.

Such are the simple facts. The cooperation of the medical profession is earnestly solicited in combating the ludicrous, yet widespread, lay prejudice against commercially canned foods.

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(1) Journal American Medical Ass'n. 90,459 and 1573 (1928).

(2) Food-Borne Infections and Intoxications, F. W. Tanner, Twin City Pub. Co., Champaign, Ill., 1933.

(3) Food Poisoning and Food-Borne Infections, E. O. Jordan, University of Chicago Press, 2nd Ed., 1930.

(4) Preventive Medicine and Hygiene, M. J. Rosenau, Appleton-Century, New York, 6th Ed. 1927, p. 608.

This is the ninth in a series of monthly articles, which will summarize, for your convenience, the conclusions about canned foods which authorities in nutritional research have reached. We want to make this series valuable to you, and so we ask your help. Will you tell us on a post card addressed to the American Can Company, New York, N. Y., what phases of canned foods knowledge are of greatest interest to you? Your suggestions will determine the subject matter of future articles.



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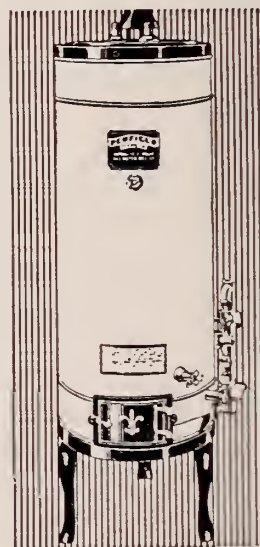
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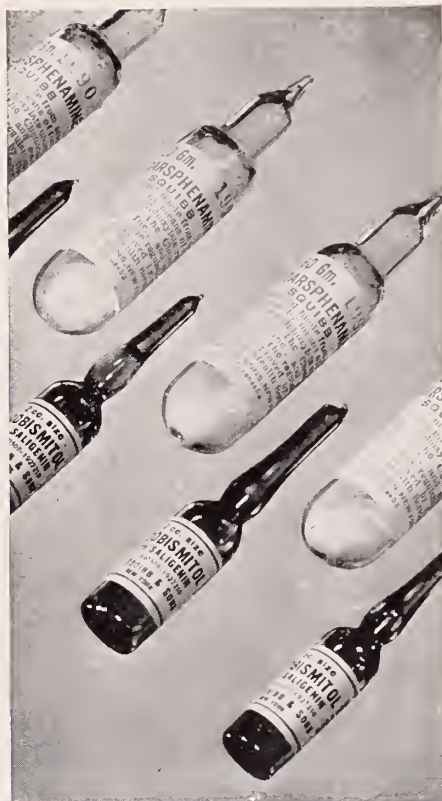
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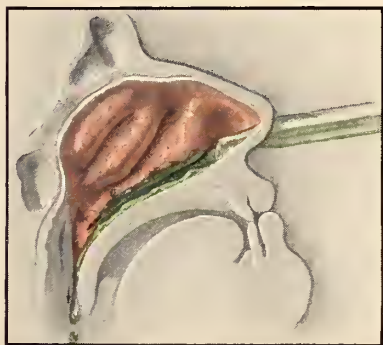


Fig. 1. The distribution of a liquid inhalant when applied by a dropper.

The solution does not reach beyond the lower border of the inferior turbinate, the bulk of the liquid gravitating to the pharynx. The spaces between the turbinates, where the congestion is greatest, have not been reached.

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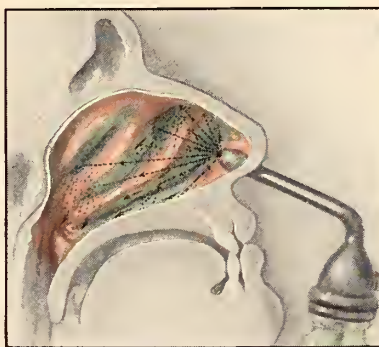


Fig. 2. The distribution of a liquid inhalant when applied by a spray or atomizer.

The inferior turbinate intercepts the bulk of the liquid intended for the middle and upper meati, sites of greatest congestion. The excess liquid is deflected to the roof of the hard palate, whence it reaches the pharynx.



Fig. 3. The distribution of a vapor when sniffed up the nose by means of an inhaler.

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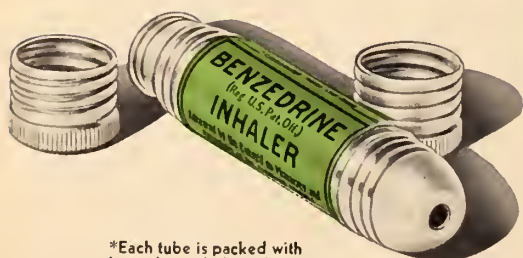
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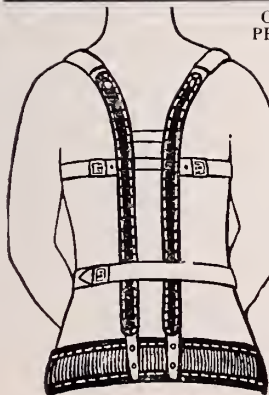
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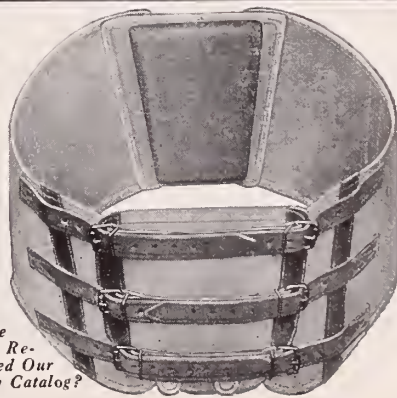
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Volume VIII
Number 2

FEBRUARY, 1936

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INFECTIONS OF THE UPPER URINARY TRACT*

JOSEPH C. BIRDSALL, M. D.**
Philadelphia, Pa.

This presentation comprises an analysis of 85 cases of pyelitis, 16 of pyelonephritis, 35 of infected hydronephrosis, 28 of pyonephrosis, and 28 of perinephritic abscess, making a total of 192 cases of upper urinary tract infections admitted to our service at the Presbyterian Hospital and the Graduate Hospital of the University of Pennsylvania. This paper does not include in its scope renal infection due to the tubercle bacillus.

In a general survey of renal infection and taking into consideration the leading and important part it plays in relationship to our mere existence or health, its great prevalence at all periods of life from birth to old age, it is necessary in a proper approach to have a fair working knowledge and understanding of the anatomical structure of this elaborate secrete-filtering organ which comprises an enormous vascular afferent and efferent system, intimately associated with a most intricate system of tubules of elimination.

In obtaining a proper conception of the various processes of inflammation which may develop in this amazingly and wonderfully constructed organ, it is highly essential to consider the etiological factors, both primary and secondary, which are responsible for its incipency and also those which cause its persistence when once established. The requisite primary factor for any renal infection is the presence of bacteria, and when we consider the chief routine function of the kidney is elimination of certain waste materials from

the body resulting from metabolism, and its constant overtaxation in being called upon to perform this elaborate work, not only in health but in the final disposition of bacteria and toxins in acute and chronic diseases in other systems of our complicated makeup, it is therefore not at all surprising that this organ is so frequently the site of bacterial invasion with the resulting pathologic pictures of acute hematogenous suppurative nephritis, cortical abscesses, carbuncle of the kidney and perinephritic abscess. The picture may also include infection of the pelvis of the kidney and extension into the tubules of the kidney with the production of pyelonephritis.

If we take for granted that we have organisms constantly being brought by the blood stream in body infections to the kidney for their final disposition or elimination, and infection of the kidney does not always follow each and every instance of renal exposure, it is necessary to consider other and essential factors in the actual production of disease of the kidney per se. The kidney is also constantly exposed to bacterial approach through other avenues in addition to the hematogenous route, and although in many cases the exact method is indeterminate, we have been able as a result of animal experimentation and clinical study, to definitely prove that bacteria may reach the kidney through its elaborate system of peri renal and urethral lymph channels, and in some cases by upward ascent per the ureter itself into the renal pelvis and from there into the renal tubules with the production en route of pyelitis and pyelonephritis.

The normal kidney will and does perform its required daily labor year in and year out without being extended to its full working capacity, and without any detriment to itself. However, when its resistance has been lowered

* Read before the Medical Society of Delaware, Wilmington, October 8, 1935.

** Professor of Urology, Graduate School of Medicine, University of Pennsylvania, Genito-Urinary Surgeon to the Presbyterian Hospital, Philadelphia.

by previous trauma, systemic diseases, or the development of back pressure, congenital or acquired, and in the presence of infection in other parts of the body, it is then vulnerable and most liable to become the seat of a severe and grave surgical condition. The experimental work of Brewer very convincingly showed the effects of trauma in the production of renal infection. In a series of experiments not one of his control animals developed a surgical condition of the kidney after intravenous injection of pathogenic bacteria. In a series of eighteen animals, which were given the injections and in addition had trauma of one kidney, five at autopsy showed no lesion or hyperemia and parenchymatous degeneration, two died of acute septicemia, and all the other eleven showed distinct surgical lesions of the kidney.

Wildbolz in experiments with rabbits was able to produce an ascending infection of the kidneys with tubercle bacilli which he attributed to ascent by the urogenous rather than by the hematogenous or lymphogenous routes. Steinke, Stewart and Sweet in a large series of animal experiments showed fairly conclusively that an extensive system of lymphatic vessels exists in the walls of the ureter, bladder, and entire structure of the kidney, and that ascending infection travels through this network and not through the blood vessels or lumen of the ureter.

A single pathologic condition in renal infections is encountered only in pyelitis. In all other infections there is namely a combined parenchymal, cortical, medullary, and pelvic inflammatory condition found at the time of clinical observation, and the bladder itself often becomes the mouthpiece as it were and its irritability should at once be a significant indication for upper urinary tract investigation. Obstruction too at some point along the urinary tract is pre-eminently responsible for the great majority of renal infections, and one of the various types of mechanical forms, congenital or acquired, or adynamic coming under the neurogenic group, should be carefully searched for in every case. The production of stasis of urine in the renal pelvis may result from almost innumerable causes beginning at the pelvis itself and including the whole urinary tract to the external urinary

meatus. The conditions may be intrinsic or extrinsic, congenital or acquired, mechanical or neurogenic, and unilateral or bilateral. The more commonly found intrinsic causes are calculus, stricture, congenital valves, vesical neck obstruction, blood clot and tumor; while the extrinsic causes are kinks or angulations of the ureter in nephroptosis, anomalous vessels, periureteral bands and adhesions, pressure from a gravid uterus, myoma or intraligamentary cyst, tumors, and diverticula of the bladder.

The most frequent vesical conditions causing ureteral obstruction, and secondarily stasis of urine in the renal pelvis, are infiltrating carcinomata and conditions developing after the treatment of vesical tumors in the region of the ureteral orifices, large calculi, diverticula, obstructive conditions at the vesical neck and uretero-vesical anastomosis.

Nephroptosis with the production of a kink or angulation of the ureter has been found, in our experience, to be the most frequent supravescical condition causing obstruction to the outflow of urine from the renal pelvis, with subsequent hydronephrosis and infection. In a series of 155 cases of nephroptosis, the condition was complicated by an infection in 97 kidneys:

Infected Hydronephrosis	35 cases
Pyelitis	57 cases
Pyelonephritis	3 cases
Pyonephrosis	2 cases

Mathe found in ninety cases of renal ptosis that infection was a complicating condition in fifty-six kidneys. Neurological conditions, injuries to the spine, peripheral nerves, spina bifida, and spina bifida occulta, tumors of the cord, and cerebro spinal lues are the commoner lesions producing adynamic stasis.

It is therefore seen that obstruction whether mechanical or neurogenic is a pre-eminent factor in the production of renal stasis and subsequent kidney infection. Urinary stasis everywhere along the urinary tract may sooner or later become the site of bacterial invasion and when back pressure is developed, the kidney is no longer a healthy organ as Hinman has so clearly demonstrated in his experimental work, and has a lessened resist-

ance and an increased susceptibility to infection. A mechanical cause with the increasing production of stasis may exist for years until some infection develops elsewhere in the body. At once there is an increased amount of work to be done, elimination of toxins and bacteria, the involved kidney can no longer destroy or prevent the excretion of bacteria, and the stagnant pool heretofore clear now becomes cloudy with infection.

Infection may occur in an apparently healthy kidney and in which no appreciable pre-existing mechanical or adynamic cause of stasis or back pressure can be demonstrated. In an explanation of this type, Rosenau, Bumpus and Helmholtz have shown repeatedly in animal experimentation, that only certain strains of colon bacilli and also streptococci exhibit a so-called selective localization in the kidney with the production of pyelonephritis. Brewer has demonstrated that the kidney is able to take care of mild or small amounts of invading organisms which reach it by the way of the blood stream or with the production of a cortical abscess and subsequent perinephritic abscess, but occasionally an overwhelming or massive dose of bacteria reaches the kidney, literally swamps it, and produces, without a contributing cause, an acute hematogenous suppurative nephritis.

The colon bacilli or "colon group," many analyses have shown to be the most frequently found inciting organisms in renal infection, though often it has been proved that they are secondary invaders, particularly to the streptococcus. Next in order of frequency and importance are the staphylococci, aureus and albus, streptococci, pneumococcus, gonococcus and organisms of the proteus group.

The classification of renal infection is made in accordance with its location and involved structures, clinical course and pathology as pyelitis, pyelonephritis, acute hematogenous suppurative nephritis, infected hydronephrosis, pyonephrosis, perinephritic abscess, and carbuncle.

Pyelitis or inflammation of the kidney pelvis is a pathologic as well as a clinical entity and the histo-pathological study shows all stages of the inflammation of the pelvis with granular and follicular types of proliferation. The infecting organisms in the descending

route, reaching the pelvis of the kidneys by way of the tubules, or by the ascending route by way of the ureter or periureteral lymphatics, and in the presence of pelvic urinary stasis, may rapidly pass upward into the kidney and the pyelitis now becomes a pyelonephritis. We have corroborated Caulk's observations in many of our cases of acute unilateral infection, finding a pronounced pelvic stasis and apparently due to a secondary oedema at the uretero-pelvic juncture. The child with the upper respiratory infection develops a pyuria, the organisms being filtered out of the blood stream by the kidney and into the renal pelvis, producing an inflammation which is sufficient to cause a partial stasis. The passing of a ureteral catheter has in many instances been sufficient to provide a free outflow of urine, the temperature immediately falls and the condition rapidly clears up. The function as determined by intravenous indigocarmin is normal or slightly retarded and this test is routinely used by us in making a differentiation between pyelitis and pyelonephritis. Many writers prefer to call these cases pyelonephritis and recommend in treatment pelvic lavage per ureteral catheter, and state the condition promptly clears up by this method. Doubt is experienced on my part as to the efficacy of this treatment in an actual case of acute pyelonephritis which shows no elimination of indigocarmin in ten minutes.

PYELITIS

The incidence of pyelitis in a group of 773 children, 384 boys and 389 girls, born at St. Mary's Hospital, Rochester, Minnesota, during 1922 to 1928, is interesting. These children had follow-up care and observation by the Department of Pediatrics of the Mayo Clinic. During the first two years of life ten girls and one boy developed pyelitis, which was verified by positive cultures of the urine. Of this group, only two abnormalities of the urinary tract were observed. Kretschmer, in a series of 100 cases of various lesions of the urinary tract in children, found pyelitis in 28 girls and only 3 boys. Helmholtz found in a series of 94 cases of chronic pyelitis in children, an associated abnormality of the urinary tract in 56.

RESUME OF CASES OF PERINEPHRITIC ABSCESS

Case	Age	Sex	Duration of Symptoms	Temperature	Hemoglobin	White Blood Count	Kidney Involved	Predisposing Diseases	Indigo-Carmine		Urine	Bacteria	Result
									Rt.	L.			
G. S.	25	M	4 wks.	98-103	56	17,400	R	Pleurisy	4	4½	Normal	Staph. aureus	Recovered
E. H.	23	M	4 wks.	98-103	55	28,050	R	Infected toe	10	3½	Normal	Staph. aureus	Recovered
T. P.	36	M	5 wks.	97-100	60	11,500	R	Appendicitis	4½	3½	Normal	Gram-negative coccus	Recovered
C. D.	25	M	3 wks.	99-103	90	22,600	L	Infected tooth	4	5	Normal	Staph. aureus	Recovered
B. H.	22	M	6 wks.	98-102	78	18,200	L	Tonsillitis	4	5	Normal	Staph. aureus	Recovered
I. B.	30	M	8 wks.	97-100		14,000	L	Mastoiditis	6	5½	Normal		Recovered
J. G.	30	M	4 wks.	99-103	60	16,600	R	Influenza	12	4	Normal	Staph. aureus	Recovered
E. B.	23	F	2 wks.	99-101		9,800	R				Normal		Recovered
M. L.	45	M	2 wks.	99-102	68	34,500	L	Infected finger	6	4	Normal	Staph. aureus	Recovered
M. M.	37	M	12 wks.	97-101	65	10,000	R	Tumor of kidney	4	5	Normal	B. Coli	Recovered
L. W.	60	M	10 wks.	95.4-100	20	16,150	L	Chronic cystitis	4	0 in 10	Pns	Sterile	Recovered
M. H.	42	F	8 wks.	97-101	41	18,050	L	Nephrolithiasis	4	0 in 11	Pus	B. Coli	Recovered drainage nephrectomy
J. P.	42	M	6 wks.	97-103	68	23,300	R	Tuberculous pyonephrosis	8	5	Pns	B. Coli	Recovered drainage nephrectomy
M. C.	39	F	13 wks.	97-103	20-70	9,000	R	Tuberculous pyonephrosis	0 in 30	10	Pus	Tubercle bacilli. B. Coli	Recovered nephrectomy
M. M.	37	F	3 mos.	100	65	10,200	R	Tumor of kidney			Pus	Cult. urine B. Coli	Incision and drainage
F. E.	48	M	1 wk.	102	69	19,600	L	Ureteral calculus	6	0 in 10	Loaded with pus	B. Coli	Incision and drain. Cured
J. A.	15	M	2 wks.	104	72	9,950	L	Renal calculus			Loaded with pus	B. Coli	Incision and drain. Cured
W. F.	56	M	1 wk.	100	72	20,500	R	Renal calculus			Loaded with pus	B. Coli	Incision and drain. Recovered
C. B.	18	M	5 wks.	103-105	78	29,000	R	Infected hypospadias incision			Loaded with pus	B. Coli	Incision and drain. Recovered
C. W.	24	M	8 wks.	98-103	45	13,750	L	Pathology 2-3 lumbar vertebrae	4	5½	Normal	Strep. hemolyticus. Staph. aureus	Recovered
C. W. (3 mo. later)				98-103	41	17,200	R	Tonsillitis	9½	6½	Normal	Staph. aureus	Recovered
E. J.	21	M	2 wks.	99.4-103	77	18,150	L	Tonsillitis	4	4	Normal	Staph. aureus	Recovered
E. C.	20	M	6 wks.	103	90	22,000	R	Secondary to furuncle of nose	8½	10½	Occ. pus	Staph. albus	Incision and drain. Cured
E. W.	18	M	2 wks.	103	76	11,000	R	Poor teeth Sinusitis Ulceration of nares	10	10	Occ. pus		Incision and drain. Cured
T. M.	11	M	2 wks.	102	67	14,700	R	Furunculosis			Occ.		Incision and drain. Cured
E. H.	22	M	2 wks.	102	72	20,000	R	Furunculosis	12½	6	Occ.	Staph. aureus	Incision and drain. Cured
A. S.	15	M	1 mo.	101	63	10,000	R	?	4½	7	Normal	Staph. albus hemolyticus	Incision and drain. Cured
L. F.	11	M	2 wks.	103	55	31,600	L	Furunculosis			Occ. W. B. C.	Staph. aureus	Incision and drain. Cured

RESUME OF CASES OF PYONEPHROSIS

Case	Age	Sex	Duration of Symptoms	Kidney Involved	Predisposing Diseases	White Blood Count	Indigo-carubin	Rt.	L.	Urine	Bacteria	Operation	Result
I. G.	39	F	4 wks.	R	Calculus. Anomalous vessel over ureter	7,950	6½	2¾		8-10		Nephrectomy	Recovery
E.	25	M	16 yrs.	L	Calculus	15,000	0 in 12	0 in 12		Loaded		Nephrotomy Nephrectomy	Recovery
H. E.	64	M	1 yr.	R	Calculus	8,300	0 in 10	6		50-60	B. Coli	Nephrectomy	Recovery
K. McC.	53	M	20 yrs.	R	Calculus	4,200	0 in 20	6		Loaded		Nephrectomy	Recovery
T. C.	60	M	2 yrs.	R	Calculus		4	4		Clumps of pus cells		Nephrectomy	Recovered (no t.b. in kidney urine)
J. W.	43	F	6 yrs.	R	Calculus. Hyper-nephromata	9,200	0 in 10	4		Loaded	B. Coli	Nephrectomy	Recovered—metastasis
M.		M	14 yrs.	L	Calculi-multiple Carcinoma-kidney					Loaded		Nephrectomy	Recovered—metastasis
E. S.	57	M	2½ yrs.	L	Ureteral calculus	13,000	3½	0 in 10		Loaded		Nephrectomy	Recovered
J. F.		F			Ureteral calculus							Nephrectomy	Recovery
R. G.	35	M	4 yrs.	L	Ureteral calculus	24,500	10	0 in 45		Loaded	B. Coli	Nephrectomy	Recovery
F. R.	26	M	7 yrs.	R	Duplication of ureters and pelvis	6,600	0 in 10 from either	6		Loaded		Nephrectomy	Recovery
P. S.	24	M	6 mos.	L	Followed typhoid fever	7,500				Loaded		Nephrectomy	Recovery
A. L.	15	M	2 mos.	L	Ptois-3rd degree	12,400	3	0 in 10		Loaded		Nephrectomy	Recovery
F. B.	2 yr. 9mo.	M	Since birth diff. in urination	R	Hypertrophy—vesical neck	10,250	0	12		Loaded	B. Coli Staph. aureus	Cystotomy. Removal of bar. Nephrectomy. Ureterectomy	Recovery
F. F.	20	F	2 yrs.	R		11,600	5	8		Loaded		Nephrectomy	Recovery
E. B.	24	F	3 yrs.	L			7½	0 in 10		Loaded	Sterile	Nephrectomy	Recovery
A. M.	67	M	1 mo.	L	Calculus	19,000				Loaded	Staph.	Nephrectomy	Blood stream infection. Non-hemo. strep. Death
L. M.	53	M	1 mo.	L	Carcinoma of bladder	21,650				Loaded	B. Coli		Death. Septicemia (B. Coli)
O. K.	43	M	10 mo.	R	Calculus	58,000	0 in 20	5¼		Loaded			Death. Septicemia Hemo-strep. Ca. of transverse colon
J. W.	80	M	20 das.	R	Calculus	7,000				Loaded		Nephrectomy	Peritonitis. Death. No break in peritoneum.
J. B.	11	M	3 yrs.	L	1-Diverticulum of bladder-multiple 2-Hypertrophy of vesical neck	15,800	0 in 25	0 in 25		Loaded	Strep.	Bladder irrigation	Death. Acute myocarditis
A. M.	72	F	40 yrs.	L	Calculus	20,800				5-6		Nephrotomy Nephrectomy	Death. Cardiac failure
S. D.	53	M	9 mos.	R L	Calculus—left	38,800	0 in 15	5		Loaded	B. Coli strep. albus		Death. Uremia
J. C.	80	M	21 das.	R	Prostatic hypertrophy					8-10		Suprapubic cystotomy	Death. Uremia
W. G.	52	M		R	Calculus	6,400				Loaded		Nephrectomy	Death
F. Z.	59	F	2 yrs.	R	Calculus	7,600	0 in 25	8		8-10		Nephrectomy	Death. Hemorrhage post-operative
A. P.	37	F	6 mos.	R	Calculus	17,100	0 in 10	8		Loaded	Staph. albus	Nephrectomy	Recovery
D. V.	13	M	8 yrs.	L		15,500	7½	0		Loaded		Nephrectomy	Recovery

RESUME OF CASES OF PYELONEPHRITIS

Case	Age	Sex	Duration of Symptoms	Kidney Involved	Predisposing Diseases	White Blood Count	Indigo-carmin	Urine	Bacteria	Operation	Result	
J. G.	60	M	5 das.	R	Hypertrophied prostate. Post-operative	20,000		Loaded	Strep. Blood & kidney	Nephrotomy Nephrectomy	Recovery	
F. S.	65	M	3 wks.	R	Median bar. Chronic prostatitis	13,250	0 in 20	5½	Loaded	Sterile	Nephrectomy	Recovery
F. B.	68	M	4 wks.	R	Median bar. Chronic prostatitis. Diabetes. Dental caries	15,400	0 in 20	6	Loaded	B. Coli	Nephrectomy	Recovery
E. B.		F	3 wks.	R	Papillary carcinoma of bladder		0 in 10		Loaded		Nephrectomy	Recovery
E. R.	18	F	8 mos.	R	General debility	6,800	0 in 10	4	Loaded		Nephrectomy	Recovery
G. H.	66	M	2 wks.	L	Anomalous vessel	10,000			Loaded	B. Coli blood	Pyelolithotomy Vessel severed	Death-septicemia. B. Coli
H. K.	53	M	3 mos.	Right then L	Papilloma of bladder. Diabetes	10,000	0 in 23	5½	Loaded	Staph. aureus	Nephrectomy	Pyelonephritis left. Death
M. H.	57	F	4 mos.	R	Cystitis	7,000	0 in 11	8		Staph. albus	Nephrectomy	Death
W. M.	68	M	5 yrs.	R L	Hypertrophied prostate. Vesical calculi. Gangrenous cystitis	19,800			Loaded	R. Kidney B. Coli Staph. aureus		Death. Uremia
C. O.	67	M	3 das.	R L	Prostatic hypertrophy. Post-operative	21,400			Loaded	B. Coli kidney Blood sterile	None on kidney	Death. Pathological report: millary absce. kidney
M. O.	59	M	2 wks.	R L	Prostatic hypertrophy. Multiple diverticuli	17,250			Loaded		Catheterization of bladder	Death
M. S.	63	M	3 yrs.	R	Prostatic hypertrophy. Bladder calculus. Cystitis	12,900			Loaded			Death. Uremia
C. P.	80	M	2 yrs.	R L	Prostatic hypertrophy. Vesical calculus	13,600			Loaded		Cystotomy	Death
R. B.	29	M	2 wks.	R	Chronic prostatitis	27,000	0 in 35 cloudy	0 in 35 clear	Loaded	No growth		Death
W. H.	56	M	7 das.	R L	Carcinoma of bladder	18,000			Loaded	Hemolytic. strep.	None on kidney	Death. Septicemia. Hemolytic strep.
B. B.	63	F	3 wks.	R L	Ureteral calculi right	18,000	7½	5	Loaded	B. Coli strep. non	None, but ureteral dilatation	Septicemia. B. Coli. Death

RESUME OF CASES OF PYELITIS

Case	Age	Sex	Duration of Symptoms	Kidney Involved	Predisposing Diseases	White Blood Count	Indigo-carmin		Urine	Bacteria	Operation	Result
							Rt.	L.				
J. A.	35	M	5 yrs.	L	Prostatitis	17,400	2½	3	40-50 left	B. Coli	Urinary anti-septics	Improved
C. M.	22	M	45 das.	R L	Chronic prostatitis	5,300	5	5	Loaded	Sterile	Urinary anti-septics	Improved
H. H.	47	M	8 mos.	L	Prostatitis, Chronic posterior urethritis, Median bar.	6,100	5½	5½	Loaded		Study and diagnosis	
W. P.	22	M	4 das.	L	Chronic posterior urethritis, Prostatitis	15,200	11	11	Loaded		Antiseptics	Recovery
J. R.	46	M	3 wks.	R	Chronic posterior urethritis, Prostatitis	10,700	3½	4	Loaded	Sterile	Renal lavage	Improved
P. W.	55	M	6 wks.	R L	Acute prostatitis		4	3	Loaded	B. Coli	Renal lavage 914 Injections	Recovered
A. S.	25	F	2 das.	R	Ureteral calculus	12,250	0 in 15	5½	Loaded		Calculus removed with extractor	Recovered
A. W.	37	M	2 das.	L	Ureteral calculus	12,400	6	0	15	B. Coli	Ureteral lithotomy	Recovered
A. F.	58	M	2 wks.	L	Ureteral calculus	16,800			Loaded	Staph. aureus	Calculus passed	Recovered
L. W.	45	F	18 hrs.	L	Ureteral stricture				25-30	B. Coli	Dilatation and lavage	Recovery
C. C.	28	F	1 da.	R	Ptosis	11,800	10	10	30-35	B. Coli	Ureteral cath. Urinary anti-septics	Improved
M. H.	40	F	4 das.	L	Ptosis, Tonsillitis Removed	13,500	6¼	5½	Loaded	B. Coli	Abdominal support	Improved
E. B.	30	F	7 das.	L	Ptosis	6,200	6	6	Loaded	Sterile	Renal lavage	Improved
A. C.	37	F	1 wk.	L	Ptosis	16,500	6½	0 in 10 per cath 10½	12-15	B. Coli	Belt and anti-septics	Improved
N. P.	24	F	3 wks.	R L	Ptosis		8	4	Loaded	Sterile	Belt and lavage	Recovery
Dr. M.	27	M	10 das.	R L	Tonsillitis	16,800			Loaded	B. Coli	T. & A. Urinary antiseptics	Improved
W. E.	48	M	4 mos.	L	Upper respiratory infection	12,000	3½	3	15	Strep. albus.	Antiseptics	Recovery
M. L.	52	F	8 mos.	R	Pregnancy		9½	4		Sterile	Renal lavage Pregl's Iodine	Recovery
S. E.	34	F	1 mo.	R	Syphilis	18,000	11	—	Loaded	B. Coli	Renal lavage	Improved
E. D.	68	F	16 wks.	R L			14¼	13½	Loaded		Study and diagnosis	

PYELITIS IN CHILDREN

Case	Age	Unilateral	Bilateral	Organisms	X-ray	Treatment	Result
M. M.	4½ mos.	Left	....	B. Coli; Staphylococcus	Neg.	Drainage	Recovery
F. J.	8 mos.	....	x	B. Coli	....	Renal lavage	Improved
F. T.	9 mos.	....	x	B. Coli	....	Renal lavage	Recovery
L. E.	2 yrs.	Left	....	B. Coli	....	Renal lavage	Recovery
H. McG.	2½ yrs.	Left	....	—	Neg.	Drainage	Recovery
W. W.	3 yrs.	....	x	—	....	Coagulation of ure.	Death
A. R.	4 yrs.	Right	....	Gram Rod Pos.	Neg.	Renal lavage	Recovery
J. R.	4 yrs.	....	x	B. Coli	....	Renal lavage; resection of vesical neck	Improved
S. F.	6 yrs.	Left	....	—	....	Drainage	Recovery
C. C.	9 yrs.	Left	....	—	Neg.	Drainage	Improved
K. G.	10 yrs.	....	x	B. Coli	....	Renal lavage	Recovery
M. W.	11 yrs.	Left	....	—	Neg.	Renal lavage	Recovery
O. B.	12 yrs.	Left	....	B. Coli	....	Renal lavage	Recovery
A. H.	13 yrs.	Left	....	Acid fast bacillus not t. b.	Neg.	Drainage	Improved

RESUME OF CASES OF PYELITIS

In our series of 85 cases of pyelitis, all but four cases gave a normal or slight delay in the appearance time with the intravenous indigo-carmin test. In two of the cases the ureter was blocked by a calculus, in a third case there was nephroptosis with a ureteral kink, and in a fourth no cause of obstruction was ascertainable. Patient showed marked improvement after ureteral catheterization and pelvic lavage. Pyelitis was present in 14 children ranging in age from 4½ months to the oldest of 13 years. There was only one death in the series and this occurred in a boy aged 3 with bilateral pyelitis and an enormous verumontanum which was thought to be giving him obstructive symptoms. Electro-coagulation of the verumontanum was followed by extravasation of urine, and though free drainage was given he suddenly succumbed. An autopsy was refused. Varying degrees of nephroptosis was present in 57 cases and in the remaining 14 cases, prostatitis was present in 6, ureteral calculus in 3, and in one case with syphilis, no definite cause could be found.

Acute pyelonephritis in my experience is a very grave and serious infection of the renal pelvis and parenchyma, and in every case in the series possible to cystoscope, there was a marked inhibition of renal function as determined by chromocystoscopy or chromoureteroscopy. The patient is acutely ill; hiccoughs, nausea, vomiting, high fever, and chills are the predominating symptoms and ureteral catheterization and renal lavage are futile. The condition calls for prompt surgical interference, decapsulation of the kidney, nephrotomy with drainage, and secondary nephrectomy, or primary nephrectomy. The following case report is illustrative of acute ascending pyelonephritis:

F. T. B., male, age 68, admitted to hospital 2-20-35 in acutely ill condition. Temp. 103°; leucocyte count 15,400; urinalysis loaded with pus. The prostate gland by rectal examination was very slightly enlarged and the secretion obtained by massage was loaded with pus cells as determined by microscopical examination. Cystoscopy showed a median fibro-glandular bar and 2 ounces of residual urine. Indigocarmin—5 c.c. of a .4 per cent solution given by vein, appeared from the left ureteral orifice promptly in 3½ minutes; there was no appearance of the dye from the

right side in 25 minutes of observation. The catheterized specimen from the left kidney was normal while the specimen from the right side was loaded with pus cells and the culture showed B. Coli. The pyelogram showed indistinct outline and feathery appearance of minor calyces. Intravenous urography failed to show any appearance of the iodide solution in 45 minutes in the right kidney. The patient's condition steadily failed to improve with ureteral drainage, and on March 5th, 1935, a nephrectomy was performed. After splitting the kidney, evacuating a small amount of purulent urine, multiple small abscesses were seen scattered around the lesser calyces and adjacent portion of the kidney. A histo-pathological examination by Dr. E. A. Case showed acute pyelonephritis with infectious infarcts of the Malpighian pyramids. This patient made an excellent recovery, but still needs a resection of his median bar.

Case 2 illustrative of acute ascending pyelonephritis, streptococcic septicemia: J. R. G., male, age 60, admitted to hospital May 11, 1933 and successfully underwent operation—suprapubic prostatectomy May 16, 1933. Convalescence was uneventful, but bladder incision slow in healing, and he was ready to be discharged June 25th, 1933. Following bladder irrigation on this date by pressure syringe, an unusual procedure as our technique calls for the gravity method, patient developed dull pain in region of right kidney, chill and rise in temperature to 102°. On June 26 urinalysis was cloudy, alkaline, specific gravity 1.006, trace of albumen, no sugar, occasional leucocyte, many motile bacteria, triple phosphates. Vomited after morning meal and immediately had a chill. Temperature rose to 106°. White blood cell count 28,000. Dull pain in region of right kidney. Tenderness marked on bimanual palpation.

June 27—Urine: acid, specific gravity 1.005, trace of albumin, microscopical examination showed clumps of pus cells; no motile bacteria. Had a chill at 10:00 a. m., temperature 105°. Blood culture taken. Small blood transfusion 50 c.c. given.

June 28th: Developed chill at 11:00 a. m., temperature 106.5°, dull pain in region of right kidney and tenderness elicited on palpation, but kidney was not palpable. White blood count 26,200. Under nitrous oxide anesthesia, the right kidney was exposed and found to be twice the size of a normal kidney; pelvis was not distended. Whole kidney was congested and capsule tense. Incision was made into kidney and middle calyx opened, evacuating about a fluid ounce of cloudy urine. Size of kidney was immediately diminished about a third; no obstruction noted at uretero-pelvic junction, or calculus palpated. Drainage tube placed in renal pelvis and a second tube outside of kidney. Incision closed. Small blood transfusion 50 c.c.

June 29th: Condition satisfactory; stomach retentive. White blood cell count 16,200.

June 30th: Small blood transfusion 50 c.c. given on this date and also on July 1st. Blood culture showed streptococci in pure culture; also culture of cloudy urine removed from kidney at operation showed streptococci in pure culture.

Patient discharged from hospital August 18th, 1933; incision healed; temperature normal. Urinalysis: slightly cloudy, acid, specific gravity 1.010, trace of albumin, no sugar; microscopically—many pus cells. After being home three weeks,

kidney incision broke down and urine drained copiously from kidney fistula.

Patient admitted to Presbyterian Hospital in October for study. X-ray negative for calculus. Cystoscopy: bladder normal; indigocarmin, intravenously, appeared from the left kidney in 3½ minutes as a deep blue; no appearance from the right kidney in 25 minutes. Indigocarmin appeared from the right kidney fistula in 5 minutes. Ureteral exploration met obstruction 1 cm. from R.U.O. Intravenous urography showed that there was extensive clubbing of calyces of right kidney, also large pelvis capacity. Nephrectomy of right kidney performed October 25th, 1933.

Histo-pathological examination by Dr. K. Fowler showed—pyelonephritis, chronic. Patient made a prompt recovery and has been well and working for the past 21 months.

A satisfactory diagnosis was never made of the cause of his ureteral obstruction, and when his incision healed and he was advised to have his right ureter explored, he made the decision to return home. After three weeks, the obstruction, which was only partial, now became complete and caused the development of his kidney fistula. He was then ready to return to the hospital for further study. I believe this case developed his blood stream infection from his renal infection. Obstructive interference to the urinary outflow was caused by the blocking of his ureter and the renal pelvis and calyces becoming distended with infected urine. A pyelo- or tubulo-venous back flow was created and septicemia developed. Prompt drainage of his kidney pelvis and repeated small blood transfusions cleared up his septicemia.

Table illustrative of characteristic differential diagnostic findings in three types of inflammation of the kidney:

	<u>Pyelitis</u>	<u>Pyelonephritis</u>	<u>Pyonephrosis</u>
Urine	Pus cells Bacteria	Pus cells Bacteria	Pus cells Bacteria
Renal function as determined by chromo- ureteroscopy	Normal	None	None
Pyelography	Normal or slight dilata- tion of renal pelvis	Clubbing and feathery ap- pearance of minor calyces	Large, irreg- ular mass— effacement of calyces

Routinely, pyelograms are made in both the upright and recumbent positions following a plain x-ray of the kidneys, ureters and bladder, in order to exclude the possibility of ptosis of kidney.

RESUME OF CASES OF PYELONEPHRITIS

In this series of 16 cases of pyelonephritis there was 5 nephrectomies with 5 recoveries. In 2 cases of nephrectomy the patients developed pyelonephritis of the other kidney and died while in the hospital. In one case, after severance of anomalous vessel supplying lower pole of kidney and pyelolithotomy, patient developed pyelonephritis and necrosis of lower pole of kidney. *B. Coli* septicemia and death ensued. Pyelonephritis and death occurred in the following: Prostatic hypertrophy with vesical calculi—3; Prostatic hypertrophy with multiple vesical diverticuli—1; Carcinoma of bladder—1; Ureteral calculus—1; Cystitis—1, and Chronic prostatitis—1.

PYONEPHROSIS

Pyonephrosis is the end-stage in infection and destruction of the kidney which has now become a functionless mass and filled with pus. It has been most aptly stated that pyonephrosis is the result of medical procrastination and neglect. The watchful waiting policy with a symptom producing calculus in the renal pelvis is to be highly condemned. The ureter may be completely blocked by a calculus causing a closed pyonephrosis or there may be an associated pyo-ureter. The condition may be an end-result in chronic pyelonephritis or infected hydronephrosis. The condition demands primary nephrectomy, or if the condition of the patient is grave nephrotomy with prolonged drainage and subsequent nephrectomy.

RESUME OF CASES OF PYONEPHROSIS

In this series of 28 cases, the cause of the pyonephrosis was as follows: Calculus of the kidney, 13; tumor of the kidney and calculus, 2; calculus of ureter, 4; 1 case in each of the following conditions: Duplication of ureters and kidneys; hypertrophy of the vesical neck with multiple diverticula of bladder; hypertrophy of vesical neck; carcinoma of bladder; prostatic hypertrophy; nephroptosis; typhoid fever, and in 2 cases the cause was undetermined. Nephrectomy was performed in 23 cases, with 5 deaths—due as follows: Cardiac, 2; septicemia-streptococic, 1; peritonitis, 1 (autopsy showed peritoneum in-

tact); hemorrhage, 1. There were 5 non-operative deaths: septicemia-B. Coli, 1; streptococcus, 1; uremia, 2; and cardiac, 1.

PERINEPHRITIC ABSCESS

Perinephritic abscess may be one of two forms, primary or secondary. The former arises from traumatism and injury to the lumbar region, and particularly in cases of penetrating wounds, organisms are carried into the perinephritic space with resulting abscess formation. This type of infection is exceedingly rare. One of our cases with infection of the 2nd and 3rd lumbar vertebrae developed an abscess in the left perinephritic space. Three months later, and after a severe attack of tonsillitis, he returned to the hospital with a perinephritic abscess of the right kidney. The secondary form more often occurs and is the result of a cortical abscess which ruptures through the renal capsule in which case there is no pyuria or urinary symptoms, or it may develop secondarily to a focus of infection within the kidney, such as pyonephrosis, lithiasis, renal tuberculosis, traumatic rupture of the kidney and tumor with infection.

In the cortical abscess type there is obtainable in most of the cases, a preceding history of furuncle, carbuncle, some minor infection such as paronychia of finger, infection in nares following pulling out vibrissae, and tonsillitis. Pain and tenderness in the back, and chill with unexplainable rise in temperature, following a history of some previous infection elsewhere, and without urinary symptoms or tell tale evidence in the urine, should immediately direct attention to such a diagnosis. The leucocyte count is, as a rule, unusually high. The tenderness is usually more acute in angle formed by 12th rib and erector spinae group of muscles, and can be elicited or made prominent by gently applying Murphy's fist percussion test over the renal area of the back. X-ray may show spine to be curved away from affected side and obscuring of outer marginal line of the psoas muscle by the abscess.

The form which develops secondarily to pathologic process in the kidney is usually so overshadowed by the renal condition that a diagnosis is not apt to be made and only dis-

covered at time of operative interference for relief of original condition.

RESUME OF CASES OF PERINEPHRITIC ABSCESS

Incision and drainage in 24 cases in our series sufficed to bring about a prompt and speedy recovery in each case. In the case of tumor of the kidney not removable, incision and drainage cleared up peri-renal infection. In four cases exhibiting tuberculous pyonephrosis 3, and nephrolithiasis 1, incision and drainage was the first procedure, and at a later date, nephrectomy was performed.

1900 Spruce Street

UROLOGY AND THE CHILD*

BRICE S. VALLETT, M. D.

Wilmington, Del.

The purpose of this paper is to cite and discuss briefly a few urological cases occurring in children. A persistent pyuria is very often associated with stasis in some form, e. g., a chronic interstitial suppurative nephritis, or an obstructing bar at the vesical neck, or a congenitally pin point urethral meatus, or still again a chronic tuberculous process in the kidney. Infection and pus may be introduced from without as in a vulvo-vaginitis. Nephric and ureteral anomalies being so often found the underlying or contributing cause in the sick child, demand that these structures be adequately studied in any obscure childhood illness. The indispensable cystoscope has at last found its well-deserved niche in the diagnosis and alleviation of urologic conditions in children. Intravenous or excretory urography is a valuable adjunct in diagnosis, but its use is very unsafe unless checked by cystoscopy and the retrograde urogram. Chronic pyelonephritis or chronic interstitial suppurative nephritis is such a common finding in children that every child under par should be suspected as having this disease until proven innocent. Childhood tuberculosis and pyelonephritis should be differentiated. The urine may give little aid to diagnosis unless persistently cultured, particularly where the streptococcus is the offender. In our community

* Read before the Medical Society of Delaware, Wilmington, October 8, 1935.

hematuria is more commonly caused by pyelonephritis than by any other disease, taking precedence over stone and tuberculosis. This is particularly true of our children where it is quite common to see grossly bloody urine following a streptococcic sore throat.

Bleeding is sometimes incited at cystoscopy on the passage of the ureteral catheter and this fact is strong evidence of the presence of the streptococcus. The treatment of pyelonephritis has advanced greatly since the introduction of the ketogenic diet into this field. It is a great advantage to have these cases in the hospital for a week so that the diet may be strictly enforced. The results are often very prompt and spectacular, cases which on admission showed pus and bacteria in the urine and a fever in a week's time now have a sterile urine, with an absence of fever. Helmholtz after considerable experience with the diet in children says: "The ketogenic diet is a useful method for treating urinary infections resistant to alkalization, diuresis and urinary antiseptics. In cases in which urinary anomalies are associated with stasis a temporary and often a permanent cure of the infection can be achieved in those cases in which a PH of less than 5.5 and a concentration of .5% beta oxybutyric acid can be maintained in the urine for a period of time. Nephrolithiasis and impaired renal function are two serious handicaps to the success of this form of treatment." The criterion of cure is two or three successive sterile cultures of the urine.

At this point we will set down briefly our technique for cystoscopy in children. If the child is of a happy disposition some effort is made to gain its confidence, after which cystoscopy is in a large percentage carried out under local anesthesia. In girls a pledget of cotton soaked in a fresh solution of cocaine crystals is placed between the labia for a few seconds, when an applicator containing the same solution is gently rotated into and for the full length of the urethra and allowed to remain for several minutes. In boys who show a tendency to co-operate diothane 1% or novocain 5% is instilled into the urethra and bladder, where it is retained for ten minutes.

Where we are unable to get the co-operation of the child it is gently put to sleep with a rectal injection of avertin which often suffices for the entire procedure, though at times a small amount of ether is needed to supplement the avertin.

Case I: Chronic Bilateral Streptococcic Pyelonephritis. A white lad eleven years of age was referred for the correction of a nocturia. There was a previous history of mastoidectomy, with subsequent ligation of the internal jugular and some brain edema, so that some thought was given to the possibility of a chronic pyelonephritis as a sequel to his mastoid infection. Excretory urograms were very unsatisfactory; he was cystoscoped under avertin and ether anesthesia. In the region of the vesical neck was seen the characteristic red puffy edema of infection. Ureter catheters were passed and bilateral pyelograms showed normal pelvic contours. Subsequently there was considerable bloody urine, and urinary culture showed a streptococcus. This boy's response to the ketogenic diet was ideal, and at this writing his urine is pus-free and his nocturia is cured.

Case II: Infective Granulomata (Urinary Bladder). A six-year-old colored boy was sent to the clinic with grossly bloody urine. He was cystoscoped at the time of bleeding and a small tumor on the bladder base was seen to be bleeding moderately. Grouped around each ureteral orifice were several discrete purplish red tumors. He had several very severe attacks of tonsilitis and his tonsils were enormously enlarged. The bladder manifestation is undoubtedly attributable to the throat infection.

Cases III and IV: Unilateral Fused Kidney. The first case (A) in a two and one-half-year-old boy; the second case (B) in a nine-year-old-girl. Streptococcus was found in A and the bacillus coli in B. Both of these children ran extremely high temperatures, ranging from 102 and 106 degrees F. during their residence in the hospital. Both developed glandular complications of the neck. A had a suppurative cervical adenitis which demanded incision and drainage. B developed a parotitis which did not suppurate. At cystoscopy both

children presented a similar finding, in that the ureteral orifices seemed drawn down and forward towards the internal orifice.

Resume of Case A. Family history irrelevant. Past history: spontaneous birth; breast fed for five months; measles and grippe. Present illness began with fever and sore throat. Out of bed too soon and symptoms became aggravated, hematuria and swelling of the glands of the neck appearing. The tonsils were markedly injected and the left ear drum showed some involvement. In the abdomen the spleen was not palpable, but there was a palpable mass lying in the right hypochondriac and right lumbar regions. Cystoscopy was done under local anesthesia and the right ureteral orifice catheterized with a No. 5 x-ray catheter. A flat x-ray film was now taken showing a peculiar ureteral outline suggesting an anomalous kidney. An injected picture showed the pelvis of a kidney whose minor calyces faced the midline. At a second cystoscopy the left ureteral orifice was catheterized and plain and injected films showed the left ureter to cross the midline at the level of the fourth lumbar vertebra and rise to join a kidney pelvis which lay caudal to the formerly x-rayed pelvis of the previous cystoscopy. This second pelvis also faced medially. At this time the urine contained many granular and a few hyaline casts. The blood picture showed Hb. 65; erythrocytes 4,150,000; leucocytes 13,200; P. M. N.'s 56%; small lymph 42%; blood urea 35; creatinine 1.5; blood culture negative. This child recovered sufficiently to have a tonsilectomy, and now is in a fair state of health. The urine is still infected and we are about to start him on the ketogenic diet.

Resume of Case B. This child was also a normal delivery and was breast fed for nine months, however she then proved to be a difficult feeding case. There is a history of mucous colitis at fourteen months, and a diagnosis of "pyelitis" at eighteen months and again at five years and now at nine years of age. On admission to the hospital the temperature was 104 degrees F., and she was critically ill. The blood picture showed Hb. 63; leucocytes 1,700; erythrocytes 2,110,000; P. M. N.'s 70%; small lymph, 27%. Two days later

the count was Hb. 48; leucocytes 1,100; erythrocytes 1,620,000. There was fragmentation of red cells. She was transfused with citrated blood and on the following day nucleotide K96 was given both intravenously and intramuscularly. The diagnosis of unilateral fused kidney was made by retrograde urography and excretory urography. Both kidney pelves laid to the left of the midline, one above the other with failure of rotation in both, both pelves facing medially. The renal mass was easily palpable. The urine revealed many pus cells and hyaline casts. The child expired five days after admission. A blood count sometime before death showed that leucocytes had fallen to 800 and the erythrocytes to 1,990,000. This is but another instance of the fatal outcome of a persistent pyuria which had not been adequately treated.

Case V: Chronic Dilatation of the Upper Urinary Tract (megalo-uretera), due to a Fibrous Bar Obstruction at the vesical neck. Obstruction at the urethro-vesical outlet in children is not so rare as was once supposed. An eighteen-month-old female child was referred on account of pyuria and painful urination. At each voiding the child would pull her hair and cry out with pain. She was found to be carrying 16 oz. of foul residual urine. At cystoscopy each ureteral orifice was seen to be enlarged to the size of a ten-cent piece. A urogram filling the bladder with sodium iodide 5% showed regurgitation up both ureters, filling both kidney pelves. The ureters were enlarged to the size of the small bowel. The P. S. P. excretion at this time was almost nil. A fibrous bar was detected cystoscopically at the bladder neck. Dr. Owsley Grant, of Louisville, reported an identical case in a female child the same age as ours, so that we were able to profit by his experience. A soft rubber catheter was placed in the bladder for permanent drainage and kept in with periodic cleansings for three months. On drainage the child improved remarkably so that we were then able to resect the fibrous bar. This we did, using the No. 24F McCarthy resectoscope. Microscopic section of the resected tissue showed chronic inflammation. The child has continued to improve but we still have a residual urine of about three or four ounces

and she still has considerable dilation of the entire urinary tract.

Case VI: Solitary Kidney with Hydronephrosis. A colored female child aged nine was admitted to the hospital with a palpable mass in the left hypochondriac and lumbar regions. This mass was painful at times and the little patient complained of fatigue constantly. Indigestion was prominent, through the bowels moved normally. Enuresis was present but there was no dysuria. The general physical examination was negative excepting the abdominal mass and an abnormally placed urethral meatus. This latter structure was found on the anterior vaginal wall just within the vaginal introitus. This finding suggested some other malformation higher in the urinary tract. Palpation of the abdominal mass revealed a solid resisting body laterally which gave way to a fluctuant mass as the bimanual palpation was carried toward the midline. This finding favored a hydronephrotic kidney. Excretory urography was a total failure. At the first two cystoscopies we were unable to locate any ureteral orifice. Indigocarmine was given intravenously but we were unable to detect its appearance in the bladder. Exploratory incision for the purpose of nephrostomy drainage was decided upon and the mass was cut down upon in the left loin. Several cystic collections of urine were evacuated, the last of which led into the true pelvis. The rest of the kidney was so firmly adherent to surrounding structures, and having no assurance that there was another kidney the wound was closed around the drain. The interesting observation was then made that the patient no longer passed urine from the bladder, all of her urine draining through the nephrostomy tube. We were then successful in catheterizing the left ureteral orifice but no orifice could be found on the right side. Only after repeated attempts were we able to pass a ureteral catheter all the way to the left renal pelvis due to an obstruction in the upper ureter, this obstruction being due to either an aberrant vessel or fibrous band. A ureteropyelogram revealed a very tortuous and distended ureter (ureterectasis) and a considerable degree of pyelactasis and hydronephrosis combined. After a catheter was successfully

passed to the renal pelvis the nephrostomy drain was removed. During the presence of the nephrostomy drain a large abscess developed in its vicinity but was evacuated and the wound healed over. In one instance the blood picture became so poor that she was transfused with citrated blood. There was wide fluctuations in the blood urea, it at one time reaching 158 mg. per 100 c.c. The phenosulphonphthalein readings were consistently poor, never exceeding 20% in one and one-half hours. At the present time, one year since operation, the blood urea is 39 mg., a tumor mass cannot now be palpated, and there is slight general improvement. We have not had the courage to again operate on this child in an attempt to free up the constricted ureter. We feel that this case is possibly a true renal agenesis. Most cases of solitary kidney are complicated by some other malformation and our case was no exception.

Case VII: Teratoma (retroperitoneal). A female child aged 22 months was admitted to the hospital with a large visible and palpable tumor in the left upper abdominal quadrant. The child, while born a few weeks prematurely, cried lustily at birth. The baby remained in the hospital for two months and made a small steady gain in weight. She was readmitted two months later for diarrhea and nutritional disturbance. Abdomen negative at this time. Discharged one month later. Nineteen months later readmitted with tumor. A blood count at this time gave Hb. 85%; erythrocytes 4,700,000; leucocytes 11,700; P. M. N.'s 77%; small lymphocytes 23%. A flat x-ray film of the abdomen revealed what were interpreted as calcified areas in the region of the left kidney. A pyelogram revealed a small renal pelvis with these calcified areas lying at the periphery of the kidney. A urinary culture of the left kidney was sterile. At this stage in the working up of the case she was moved to the Babies' Hospital in New York City coming under the care of Dr. A. A. Weech to whom I am indebted for the following data:

"At this time the chief finding was a large tumor in the left kidney region which to me seemed to be in the nature of a highly vascular tumor rather than a cyst. The liver was enlarged

so that the border was on a level with the umbilicus and on the upper surface of the liver I thought we could feel a metastatic nodule, although I could not be sure that the irregularity on the surface did not result from rolled up omentum.

"A complete urological examination was not done because the story of rapid growth suggested that immediate laparotomy was indicated. However, we did determine the phenolsulphonphthalein output at 9%, an unsatisfactory measurement since the patient voided only 25 c. c. in 2 hours. The serum non-protein nitrogen was 25.6 mg. The urine did not contain significant amounts of pus. Intravenous urography revealed a normal renal pelvis on the right, but the left pelvis was so incompletely visualized that its exact contour and position could not be ascertained. However, flat plates of the abdomen showed clearly the areas of calcification to which you referred in your letter. In some of the films only it was clear that these shadows were caused by four teeth, the outline of enamel and pulp canal being clearly shown. One of these shadows showed the outline of a crown with multiple cusps in the form of a molar tooth, and one of the other shadows belonged clearly in the canine group.

On the basis of this finding we felt certain that the tumor was a teratoma. The enlargement of the liver with possibility of a nodule suggested that a portion of the tumor had undergone malignant change. However, we were not sure of this interpretation but wished to give the patient the benefit of the doubt, and on April 27th she was explored by Dr. Edward Donovan through a left subcostal incision. Because multiple metastases were found in the liver, the condition was deemed inoperable and no attempt was made to remove the primary growth. The latter was extremely large and the point of attachment not definitely ascertained. Biopsy was taken from one of the liver nodules and on section showed a highly malignant type of epithelial tumor. She expired in the hospital on May 18th, 1935. Her post-operative course had been uneventful but shortly she developed an elevation of temperature which persisted until death and was associated with multiple areas of purpura and edema. Blood culture revealed the presence of the hemolytic streptococcus. An autopsy was obtained. The attachment of the tumor mass was retroperitoneal, the exact site of attachment not being made out as we were only allowed to open the previous operative incision. However, it is certain that the tumor was not attached to the kidney or adrenal. Section of the tumor did show that about one-third of the mass was cystic and filled with a caseous material containing many hairs. The more solid portions contained, in addition to the teeth, bits of cartilage and probably some bone. Microscopic sections have not yet been completed but it is apparent she suffered from carcinomatous degeneration in the epithelial tissue of a teratoma. It may be of interest to you to know that one of our anatomists pointed out the age of the teeth in the tumor, as shown by x-ray, coincided with the age of the patient, a fact which furnished material for speculation regarding the twin nature of the tumor."

Hinman in his recent urology writes that all tumors in the upper part of the abdomen are so rare that any tumor of this kind in a

child under five years can be called a renal tumor with small chance of error. Under six years of age embryonal tumors are almost the only tumors found in children except polycystic kidney and retroperitoneal tumor. Their tendency to rapid growth and encapsulation without tendency to break through into the renal pelvis reverses the order of cardinal symptoms as seen in the adult. Tumor and pain predominate and hematuria is relatively rare. The present trend is to give all cases of renal tumor thorough irradiation by deep x-ray before any surgery is attempted. Some remarkable results have been attained by its use, particularly in reducing the size of the tumor, and rendering the previously inoperable case operable.

Irrespective of the nature of the urological problem one dealing with children keeps a sharp outlook for the streptococcus. In six of the above reported cases this organism was present, causing a fatal outcome in two.

In conclusion may we plead for constant surveillance of the child, sick and well, expending our energies in early detection of those entities which add so much to the sum total of childhood suffering.

Medical Arts Building.

DISCUSSION

DR. L. W. ANDERSON (Wilmington): The cases which were presented by Dr. Vallett were very interesting and informative, while Dr. Birdsall has presented in a most comprehensive manner the subject of upper urinary infections. In discussing this I only wish to take up one phase, and that is congenital abnormalities in adults which only present symptoms after adult life. I would like to show these slides, please.

(Slide). Case I is that of a white male, twenty-three years of age, first seen on June 13, 1935. At this time he was complaining of pain on voiding, frequency, tenesmus, hematuria, and passing of pus. His family history was that his mother had died of tuberculosis in her thirties. As to his past history he had had the usual diseases of childhood and said that he had had some bladder trouble with frequency and burning on urination at age of two and again at age six. He does not recall

having had frequent urination or further urinary disturbances until July, 1934, when he was supposed to have contracted gonorrhea. About six weeks following this supposed G. C. infection the patient began to have difficulty in voiding, as in his complaint. He lost fifteen to twenty pounds of weight during the past year. A cystoscopy with cystograms reveals a very much distended urinary tract on the right side with reduplications of ureters on this side. He had, as you see here, a marked hydronephrosis and megalo-ureters with a looping of the ureters on the right side.

(Slide). This is the lateral view. It is not very clear but you can see the same thing. It doesn't show the double ureters.

(Slide). This shows papilloma of the bladder. Unfortunately, the man who made the picture got the base and not villi.

(Slide). Case 2 is that of a white female, age twenty-six, first seen April 30, 1935. By that time she was complaining of pain in the right lumbar region associated with frequency and pain on voiding of three years' duration following a normal delivery. Her past history revealed an appendectomy in 1927. Cystoscopy and pyelograms revealed bilateral ureters and pelvices with a slight ptosis of right kidney and angulation of the lower ureter on this side. This patient had had no symptoms, as far as her history went, until after the delivery of her child. This picture is made in a reclining position.

(Slide). This one is in an upright position. This doesn't show very clearly. On the right side she had an acute angulation and some ptosis of that kidney.

(Slide). Case 3 is a white male, age seventeen, first seen January 12, 1935. At that time he was complaining of frequency and burning on urination, with cloudy urine. As to his past history, he had had the usual diseases of childhood and enuresis until six years of age, when he had a small growth removed from the neck of the bladder and a circumcision. He had no further urinary trouble until six months ago, when his symptoms returned. This case presented itself with urinary frequency, and burning. We made pyelograms of him in the reclining and upright positions,

and if you will note, you will see more cupping here. There was some question as to what the real condition was but we had the x-rays studied by some very able x-ray men in Philadelphia who confirmed our diagnosis that he has bilateral polycystic kidneys plus infection with cystitis.

DR. R. W. TOMLINSON (Wilmington): Knowing Dr. Vallett as I do, I appreciate the intense degree of enthusiasm with which he compiled this paper. I feel that he has presented to the Society an expression of opinion which is very well worth while. Being interested in children, and particularly in idiopathic enuresis, I am interested to know if he feels in those cases where the causative condition was cryptogenetic they should have a cystoscopic or retrograde pyelographic examination made, and if the developments therefrom would be of any efficiency in solving the nature of the causative factor which produced the condition.

As for Dr. Birdsall's paper, it seems to me this Society has been particularly privileged to have had this paper presented in classical fashion, and it merits nothing but extreme laudation that we are fortunate to have his subject and his principles enunciated.

DR. R. O. Y. WARREN (Wilmington): I had the good fortune of seeing these children which Dr. Vallett presented, and I think the little colored girl that he showed, Virginia, is a living monument. If ever a child was sick that child was sick. She had a mass in her belly, as Dr. Vallett has described, that was tremendous. It was virtually startling to us when, after his original operation, she didn't produce any urine except as it came through her nephrostomy tube.

There is just one point, as a pediatrician, that I would like to emphasize in relation to these early congenital anomalies, and that is that when a baby vomits without any other cause it is a very marked indication for an examination of the genito-urinary tract, and in a great many instances some congenital malformations will be found. Fortunately for the pediatrician, if we do not have an able genito-urinary man about twenty-five per cent of these will show up simply by filling

the bladder with an opaque substance and it will regurgitate.

To pediatricians, when we see a pyuria report we always go into it with our fingers crossed because we cannot be sure it isn't one of these infections Dr. Birdsall described so ably, or whether possibly it is some congenital anomaly. This one boy with the unilateral fused kidney that Dr. Vallett showed came in with a picture of what seemed to be acute hemorrhage nephritis. Then he developed this mass on his side and it was only with Dr. Vallett's able help that we were able to make the ultimate diagnosis of congenital malformation.

PRESIDENT NILES: Is there any further discussion on either of these papers, If not, Dr. Vallett, do you have anything to add?

DR. VALLETT: I just want to say how much I have enjoyed Dr. Birdsall's paper. I have known him quite a long time, and it certainly was a very comprehensive and very instructive lesson to us all.

There are two things, I feel, that stand out in my mind as important things in the treatment of a great many of these urinary infections, and I want to emphasize them again. It is something we have not yet all appreciated, and that is the institution of this ketogenic diet. Helmholz has shown in some of the children at the Mayo Clinic, where he has used all types of urinary antiseptics and alkalization and was unable to sterilize the urine, that when he used the ketogenic diet he was amazed sometimes to find that in twenty-four hours the urinary tract gave a sterile culture. We have had several cases in children where we have gotten a sterile culture within a week. The beauty of the diet is that after its institution you only have to keep them on it four or five days before you get a sterile culture. Now, that won't happen with every child, but with a lot of children that have these infections you can get a good result with it.

In infections of the upper urinary tract, another thing that has impressed me from reading Cabot is the method of nephrostomy. Very often where you have infection in a

kidney pelvic lavage and the use of the ketogenic diet won't always give you the result you wish. Nephrostomy has not been used in the past as much as it should be. If you have a stone in the pelvis of the kidney with infection, just to remove that stone and close the kidney is not always sufficient. The thing to do is to put a rubber tube through the cortex of the kidney and drain that kidney a sufficiently long period of time. Then if you want to use the ketogenic diet, do so. But nephrostomy certainly is indicated more than it has been used in the past.

PRESIDENT NILES: Is there any other discussion of Dr. Birdsall's paper? If not, do you have anything to add, Dr. Birdsall?

DR. BIRDSALL: I wish to express my great appreciation for your kind invitation to come down here and speak to you.

Venereal Disease Information is a monthly publication prepared by the U. S. Public Health Service for distribution among the medical profession throughout the United States.

It is the purpose of the Public Health Service in issuing this publication to provide in condensed form a monthly summary of the scientific developments in the diagnosis, treatment, and control of syphilis and gonorrhea. More than three hundred American and foreign journals are reviewed for this work. Abstracts are made of articles describing laboratory, pathologic, and clinical work in the field of venereal diseases. An index for the year is published with the December issue.

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EDITORIAL

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VOL. VIII FEBRUARY, 1936 No. 2

FOR PROFESSIONAL SERVICES

In these days when the doctor is collecting anywhere from forty to sixty-five per cent of his fees—and fees that are reduced fees in the first place—any suggestion that augments the vital function of collections is welcome. A circular from a large eastern mail order house came to our notice the other day with such a suggestion. Here it is:

A doctor friend of mine told me he has hit upon an idea which has speeded up his collections by 30% and has practically eliminated complaints or questions by patients about charges.

Instead of sending out his bills saying "Professional Services, . . . \$37.50," he had some bill-heads printed which listed the various items and rates with a space to write the number of each and make the extension in dollars;

Office Consultations (\$2) \$

House Visits (\$3)

Night Calls (\$5)

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Gastric (\$5)

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Total for Services Rendered \$

There are many patients who think any visit, night or day, should cost \$3.00; that laboratory work should be thrown in for good measure; patients who forget that a busy physician loses money from office calls when he is unnecessarily detained. But my Doctor friend tells me that, with fully itemized bills, the patient is much more apt to be reasonable and will admire the accuracy of the statement. And in the settlement of an estate, an itemized bill precludes any question as to its validity.

This idea of itemized bills is not new, yet it has never gained general acceptance by the general practitioner. In the specialties the usual practice has been to render a bill for a lump sum—a case fee—rather than for separate services, but it would seem that the specialists would often be better off if they charged so much for the operation, so much for each hospital visit, so much for each office consultation, etc. There is some peculiar quirk in man's psychology that makes a bill of \$127 look all right, when one for \$125 appears all wrong and the doctor may be asked to make it an even \$100. In any event, whether the bill as rendered be itemized or not, the patient is entitled to an itemized statement if he asks for it, and the doctor who cannot produce such a statement may find his claim in dispute.

If, as the quotation states, one doctor's collections increased thirty per cent by the mere itemization of his bills it would seem that the idea should merit widespread adoption.

WOMAN'S AUXILIARY: A. M. A.

Mrs. Lawrence J. Jones, the new President of the Woman's Auxiliary to the Medical Society of Delaware, has announced the appointment of the following chairmen of standing committees:

Program, Mrs. Emil R. Mayerberg; public relations, Mrs. Norwood Voss; legislative, Mrs. R. W. Tomlinson; finance, Mrs. W. O. LaMotte; membership, Mrs. Roger Murray; hospitality, Mrs. C. L. Hudiburg; hygiene, Mrs. Thomas Baker; archives, Mrs. H. G. Buckmaster; revisions, Mrs. George McElpatrick; sewing, Mrs. J. W. Butler; printing, Mrs. Gerald Beatty; flowers, Mrs. John Mullin; press and publicity, Mrs. C. L. Munson.

On February 11th the Auxiliary gave a tea at the Delaware Academy of Medicine. The Wilmington City Federation of Women's Clubs and Allied Organizations were the invited guests, for the purpose of acquainting them with the aims and accomplishments of the Academy.

The January sewing meeting was held on the evening of January 21st, at the home of Mrs. J. W. Butler, when aprons were made for the Visiting Nurses' Association. The next sewing meeting will be held at the home of Mrs. Willard Smith on February 17th.

The following article by Mrs. Robert W. Tomlinson, immediate past president of the National Auxiliary, is taken from their *News-Letter*:

It is with the greatest pleasure that I have accepted this opportunity to send a message to the Auxiliary, particularly because I perhaps realize now, even more fully than I did in the very busy days of last year, how utterly impossible it would be for one person to feel that anything had been accomplished during her term of office, were it not for the loyalty and co-operation of the many thousands of members that make up our wonderful organization. One cannot have been your leader with its high honors and equally great responsibilities, without learning far more the fineness of the Medical profession, appreciating more deeply its ethics and ideals and attaining to a greater degree a clearer perspective of what it has done and will do for humanity.

There is one particular factor of our work that I want to call to your attention—the ever-increasing demands and duties that come necessarily to your president and it is my high hope that before many years have passed the way may be made clear to have some permanent

office, where all routine matters may be taken care of and lessen the responsibilities of the National President. That officer is not only President, but also as the set-up is at present, Executive Secretary. If she is away for any length of time, when she returns, the correspondence and problems accumulated during her absence await her. Each year the situation grows more complicated as the Auxiliary grows in numbers and the scope of its opportunities for program and work broadens. And it is only with the thought that I hope that each and every member will keep her mind alert to this thought and offer suggestions for lightening the daily routine of your highest office.

I do not believe that any President ever appreciated or enjoyed her term as president more than I, and I do not want anyone to think that I am writing these words in any spirit of complaint, but the very high admiration that I have for each of our wonderful leaders makes me fearful that without realizing it, we may grow to the place where these responsibilities may grow beyond the actual endurance of the average doctor's wife.

I cannot close without paying tribute to the work that is being done under our charming and able President, Mrs. Herbert and her fine co-workers. I am filled with admiration and deepest respect for what they are doing. I send greetings for the New Year and all good wishes for the greatest success as well as appreciation for what you are and have been to me.

MISCELLANEOUS

A Post-Graduate Institute, offering an intensive and interesting study of the newer work in the field of cardio-vascular and renal diseases, will be conducted by the Philadelphia County Medical Society during the week of April 20 to 24, inclusive.

The program, to be held in the Bellevue-Stratford Hotel, Philadelphia, has been designed to meet the needs of all members of the profession, but particularly those in general practice. Physicians from all parts of the eastern and east-central United States are invited to attend.

Lecturers, about 30 in number, have been selected from among the foremost teachers in this great center of medical education. The medical faculties of the University of Pennsylvania, Jefferson, Temple, and Woman's Medical College of Pennsylvania, are represented on the program. While approaching the subject from specialized viewpoints—those of the physiologist, cardiologist, pediatrician, surgeon, roentgenologist, bacteriologist, internist—the presentations will be of a strictly practical nature, and should be of real value

to the general physician, who finds cardiovascular conditions occupying a large proportion of his time.

The Philadelphia County Medical Society, in conducting the Post-Graduate Institute, is meeting the demands of many physicians who have felt the organized profession should provide them with this type of opportunity for keeping abreast of medical progress and thus maintaining the highest standards of medical service. The only charge is a \$5.00 registration fee to cover the Institute's expenses. It is hoped to make the event an annual one, giving special attention each year to a different subject.

BOOK REVIEWS

The Pharmacopoeia of the United States of America. Eleventh Revision. Pp. 676. Cloth. Washington: U. S. Pharmacopoeial Convention, 1935.

The new Pharmacopoeia has made its appearance, and will become official on June 1, 1936. The general arrangement and style conform closely to its predecessors. Some 58 new drugs are included; and 119 older ones are deleted, including insulin (because it is patented). A critical review of the book will be found in an editorial in the *Journal of the A. M. A.*, Vol. 105, (Dec. 21) 1935, page 2074.

Delaware was represented by one delegate in the original convention of May, 1819, and in all of the subsequent revisions. Our society is sometimes referred to in the historical section as the Delaware State Medical Society: it should uniformly be cited as the Medical Society of Delaware.

The volume was prepared by the Committee on Revision, Dr. E. Fullerton Cook, chairman, and they seem to have offered a work with the minimum of defects. It is published by the Board of Trustees, and printed and distributed by the Mack Printing Company, Easton, Pa.

The National Formulary. Sixth Edition. Pp. 556. Cloth. Washington: American Pharmaceutical Association, 1935.

The new National Formulary has also made its appearance, and likewise will become official on June 1, 1936.

This new edition follows the style of the U. S. P., rather than that of previous editions, a definite improvement. It includes 80 of the 119 articles omitted from the U. S. P., together with 150 other admissions. There are 319 deletions, and 459 holdovers. The major additions are: ampules, tablets, fluid extracts, syrups, tinctures, and ointments.

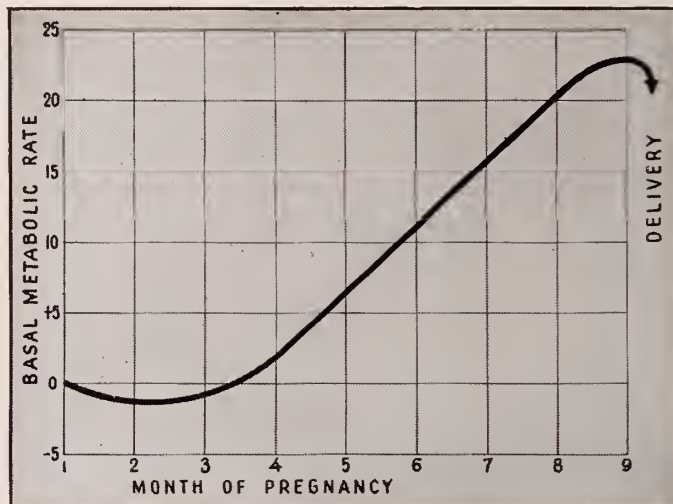
We have often questioned the advisability of having *any* N. F. It seems like the fifth wheel to the wagon, but since drugs come and go, perhaps it is serviceable to record their ascent and descent in the N. F. There is no question as to the value of N. N. R., since the physician is entitled to some exposition of the new preparation other than the literature of the manufacturer, but in the matter of the N. F., honest division of opinion prevails. However, the present offering seems to us superior to previous editions. Like the new U. S. P., it is printed and distributed by the Mack Printing Company, Easton, Pa.

Infant Nutrition. By W. McKim Marriott, M. D., Professor of Pediatrics, Washington University School of Medicine, St. Louis. Second Edition. Pp. 431, with 31 illustrations. Cloth. Price \$4.50. St. Louis: C. V. Mosby Company, 1935.

The first portion of the book deals with growth and development, and the metabolism of infants. A chapter is also devoted to vitamins and their sources. The chapters on digestion and feeding are comprehensive and expressed in a manner which can be easily understood. Formulas of sweet milk, evaporated milk, and lactic acid milk are given, together with a discussion of special and proprietary foods. The last portion of the book is devoted to a discussion of malnutrition, diarrhea, dysentery, vomiting, and constipation. Prematurity, rickets, tetany, and scurvy are discussed and there is a new chapter on allergy.

It is a pleasure to read this book, which contains the essentials now known about its subject. Because it is so concise and accurate, it is a very valuable book to any physician who treats infants.

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NORMAL PREGNANCY has its disturbances. During the first half of pregnancy the woman's metabolic rate is not changed. After the fourth month it gradually increases to 23% above her norm. Caloric increase in the diet is thus necessary after the fourth month.

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Proc. Soc. Exp. Biol. and Med., 1934, 32, 241-245
Laryngoscope 1935 XLV, 149-154
N. Y. State Jour. Med. 1935, 35—No. 11,590★



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*Journal of the American Medical Association,
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CANNED FOODS AND THE PUBLIC HEALTH

II. Iron and Tin Salts

• The question is sometimes raised as to whether the metallic salts which canned foods may acquire from contact with tin containers are objectionable from the standpoint of public health. We are glad to present the facts in answer to this question.

The modern "sanitary style" can is manufactured from "tin plate". As the name implies, tin plate is made by plating or coating thin steel sheets with pure tin. This tin coating cannot be made absolutely continuous; under the microscope, minute areas can be noted in which the steel base is exposed.

Foods packed in plain or unenameled cans are, therefore, exposed to iron and tin surfaces. In enameled cans, foods are mainly in contact with inert lacquers baked onto the tin plate at high temperatures. However, because of minute abrasions in the enamel covering, unavoidably introduced during fabrication of the can, foods in enameled cans may also have limited contacts with iron and tin surfaces.

It is common knowledge that canned foods may acquire small amounts of these metals from contact with their containers. The acquisition of iron and tin salts in this manner is an electrochemical phenomenon (1); and the amounts of these metallic salts thus acquired will depend, among other factors, upon the character of the food. In general, the acid foods tend to take up more of these

metals; especially when air is admitted after the can is opened. However, the quantities of tin or iron present in canned foods, as a result of reaction with the container, are small; the analytical chemist reports these amounts in "parts per million".

As far as iron is concerned, it is commonly accepted that the amounts of this element—recognized as essential in human nutrition—which may be present in canned foods, are innocuous.

As to the tin salts which may be present in canned foods, the Department of Agriculture has authorized the following statement as the result of its own investigation:

"Our own experimental work, involving the ingestion of far larger amounts of tin than any previously reported, and supported by the experimental evidence of other investigators, leads us to the conclusion that tin, in the amounts ordinarily found in canned foods and in the quantity which would be ingested in the ordinary individual diet, is for all practical purposes, eliminated and is not productive of harmful effects to the consumer of canned foods." (2)

It may therefore be stated that the amounts of tin and iron salts normally present in commercially canned foods are without significance as far as possible hazard to consumer health is concerned.

AMERICAN CAN COMPANY

230 Park Avenue, New York City

(1) Kohman and Sanborn, *Ind. Eng. Chem.* 29, 76, 1373 (1928); *ibid.* 22, 615 (1930).

(2) "Food-Borne Infections and Intoxications", F.W. Tanner, *Twin City Pub. Co.*, Champaign, Ill. 1935, p. 90.

This is the tenth in a series of monthly articles, which will summarize, for your convenience, the conclusions about canned foods which authorities in nutritional research have reached. We want to make this series valuable to you, and so we ask your help. Will you tell us on a post card addressed to the American Can Company, New York, N. Y., what phases of canned foods knowledge are of greatest interest to you? Your suggestions will determine the subject matter of future articles.



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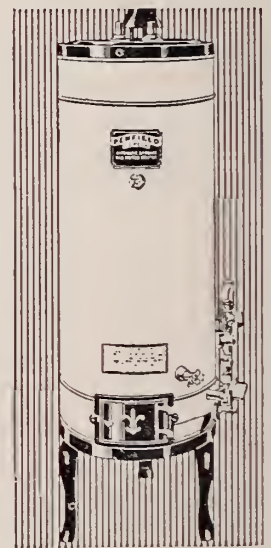
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SOLLMANN (A Manual of Pharmacology, 4th Ed. Saunders, p. 774), discussing the therapeutic uses of dialkyl barbiturates, says they have "a wide variety of applications: To secure sleep, to dull worry and apprehension and to calm nervousness and obtain tranquillity and rest in conditions ranging from 'overwrought nerves' through drug addictions, hyperthyroidism, mania, chorea, and epilepsy; . . . they allay the apprehension and greatly reduce the risk of operation."

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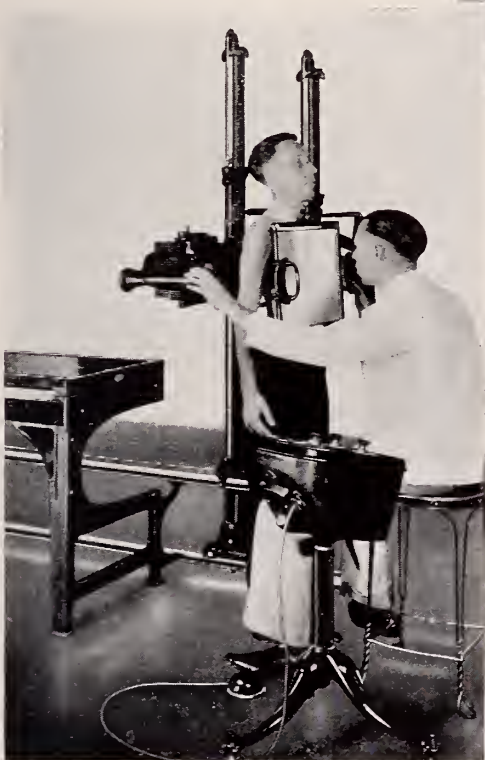
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REFERENCES:

- Kugelmass, Clinical Nutrition in Infancy and Childhood, (Lippincott).
Marriott, Infant Nutrition, (Mosby).
McLean & Fales, Scientific Feeding in Infancy, (Lea & Febiger).

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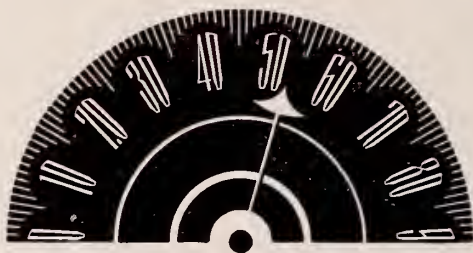
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THE DIAGNOSIS OF CORONARY ARTERIOSCLEROSIS AND ITS CHIEF COMPLICATIONS*

CHARLES C. WOLFERTH, M. D.**

Philadelphia, Pa.

Classification is useful in science in proportion to its help in placing facts in their proper relations to each other and revealing gaps in knowledge. Good classification is an instrument for consolidation of scientific advances, for precision of thought and expression, and for stimulating research. In no field has classification proven more indispensable than in medicine. Thus, satisfactory diagnosis is impossible without adequate classification of diseases. Recognizing this fact, the American Heart Association during recent years has fostered a movement for more complete diagnosis of cardiovascular diseases than had been customary in the past. As a part of this movement, a system of classification was devised with etiological, anatomical, physiological and functional divisions. According to this system, a diagnosis is not regarded as complete unless it includes all four categories. The physician who tries to make this fourfold diagnosis is compelled to adopt a broader point of view and make a more thorough study of his patient than if he were satisfied with a less complete diagnosis. It has the further advantage of exposing to fuller view the deficiency of medical knowledge regarding many conditions, thus furnishing a constant challenge to our ignorance. However, it must be admitted that the diagnostic scheme is far from perfect. Possibly an example will clarify this point. If a patient develops coronary occlusion, an etiological diagnosis of coronary arteriosclerosis is permitted. While coronary disease may properly

be regarded as an etiological factor in the pathogenesis of coronary occlusion, nevertheless from a broader point of view of such a case, coronary sclerosis should be regarded as the fundamentally important anatomic diagnosis rather than an etiological diagnosis. The important etiological diagnosis would be the cause of the coronary arteriosclerosis. It is scarcely necessary to point out the deficiency of our knowledge in this field. As practitioners, however, we have done our duty from the diagnostic viewpoint, when we have completed our diagnostic analysis as far as careful study of the patient with all available means at our command permits in the light of contemporary knowledge.

The keystone of cardiovascular diagnosis is the anatomic diagnosis. Studies in etiology must utilize anatomic diagnosis as their foundation. While it is possible to detect physiological aberrations and impairment of function without a knowledge of the underlying anatomic alteration, the significance of such derangements can be much better estimated in the light of the anatomic diagnosis. It is unfortunate that our knowledge concerning the etiology of coronary arteriosclerosis is so limited. Progress in this field would probably lead to more effective measures for the prevention or possible arrest of the disease.

Coronary arteriosclerosis from the clinical viewpoint divides itself into the following stages: (1) A latent stage during which no symptoms are present, although the heart may be considerably damaged. (2) A stage of mild symptoms such as easy fatigability, diminution of exercise tolerance, indigestion, vague discomfort in the chest, or perhaps merely an indefinable loss of the sense of well being, and (3) a stage of partial or complete disability. In this stage the predominating clinical phenomena may be those of (a) an-

*Read before the Medical Society of Delaware, Wilmington, October 9, 1935.

**Professor of Clinical Medicine, University of Pennsylvania.

gina pectoris, (b) coronary occlusion, or (c) circulatory insufficiency with or without congestive failure.

The latent or asymptomatic stage. It is quite probable that most patients with coronary arteriosclerosis go through a latent stage lasting for years. As a rule, the disease is not discovered during this stage. There are several reasons for this. (1) Only a small minority of presumably well individuals offer themselves for examination. (2) Physical examination frequently fails to reveal evidence of coronary artery disease even though advanced. (3) Functional tests of the heart have not proven of much diagnostic value in detecting coronary disease. (4) Electrocardiography, although an extremely valuable procedure for detecting changes in the myocardium does not reveal changes in the arteries themselves. Until actual myocardial damage occurs, electrocardiograms furnish no evidence of coronary arteriosclerosis.

If, however, diagnostic surveys are made of groups of individuals beyond the age of 40, it is found that latent coronary arteriosclerosis is far from rare. Electrocardiographic examination proves to be the most useful procedure for detecting such lesions. If it is omitted, the majority of cases are apt to be missed. In one group of 150 active corporation executives, studied with Dr. T. Grier Miller, the age range was from the early thirties to sixty-five. Of these, twenty-four showed definite electrocardiographic evidence of myocardial change and twelve additional were placed in a doubtful category. Most of these men regarded themselves as perfectly well. Some, however, had hypertension and evidences of arteriosclerosis in the vessels that were accessible to direct examination. These studies were begun five years ago and since that time several of the men with abnormal electrocardiograms have developed clinical evidences of heart disease. It is of interest, however, that one of the group with normal electrocardiograms developed coronary occlusion about a year after a normal tracing had been obtained. This man, however, had shown considerable cardiac enlargement and advanced aortic arteriosclerosis on fluoroscopic examination.

The important point to be made regarding

the diagnosis of latent or asymptomatic coronary sclerosis is that clinical examination is totally inadequate for its detection. Both electrocardiography and x-ray study of the heart and great vessels, preferably orthodiagraphy should be made. Nevertheless, careful and complete history and physical examination are fundamental in the study of any patient and the findings obtained by special methods of examination are to be interpreted in the light of clinical findings. Nothing can lead to more grotesque error than the attempt to interpret laboratory results independently of the clinical picture.

In summary, the following points may be made regarding the recognition of coronary sclerosis in the latent or asymptomatic stage: (1) Clinical examination alone is inadequate. (2) Electrocardiographic and x-ray study is necessary. (3) Unless actual changes in the myocardium have occurred, the special methods will also fail to reveal evidence of coronary disease. Thus we will continue seeing sudden death from unsuspected heart disease although the frequency of this occurrence can be tremendously lessened by adequate examinations. However, ordinary periodic or health examination is not enough since so many of the cases escape detection.

The stage of mild symptoms. In this stage the diagnostic difficulty may be as great as in the asymptomatic stage. Nevertheless, it is possible to elicit certain symptoms which may arouse suspicion of cardiac involvement. Among the most important of these are easy fatigability, diminished tolerance to exertion especially breathlessness on exertion that had previously been well borne, cardiac consciousness with palpitation or vague precordial distress, digestive disturbances, particularly flatulence, insomnia or vague nervous disturbances. All of these symptoms may have a variety of causes; it is advisable not to neglect coronary disease as one of the possibilities. As in the latent or asymptomatic stage, electrocardiographic and x-ray studies are practically indispensable. A completely negative examination is to be regarded as evidence against the view that the symptoms are cardiac in origin although it does not rule out this possibility. Conversely, the positive finding of evidences of disease favors

the view that the symptoms are cardiac in origin. In any event, the discovery of evidence of heart disease whether or not the symptoms present are caused by it, justifies the physician in taking whatever steps are possible to protect his patient.

The stage of partial or complete disability. For convenience the cases with disability may be considered under the three clinical categories mentioned above, namely, angina pectoris, coronary occlusion, and circulatory insufficiency. These groups, however, are by no means mutually exclusive, and do not constitute a classification. The patient with angina pectoris may develop circulatory insufficiency or coronary occlusion or both. Angina pectoris is not infrequently the precursor of coronary occlusion; on the other hand, one who has survived an attack of coronary occlusion is liable to attacks of angina pectoris. Furthermore, circulatory insufficiency may be initiated by coronary occlusion.

Angina Pectoris. Little can be added at this time to Heberden's original description of the symptoms of angina pectoris. The pain is usually described by the patient as constricting or viselike, burning, boring, or an intolerable feeling of fullness in the chest. Sharp or lancinating pains are rarely anginal. The pain does not suddenly reach its climax. The intensity as it enters the consciousness of the victim is usually not great, but it rapidly increases until it reaches its maximum. After variable periods, usually one to fifteen minutes, it begins to subside although it may persist as a dull pain for a considerable period of time. It usually centers about the substernal area although less commonly it may be precordial. It may radiate to the back, the neck, down the left arm, the right arm, or both arms. The pain almost never extends below the epigastrium. The pulse rate may be unaffected or somewhat elevated. The blood pressure is usually slightly and occasionally markedly elevated. The attacks are brought on by exertion or by emotional excitement, and in certain cases (to-bacco angina, extremely nervous individuals, or advanced coronary disease) without any obvious precipitating factor. They may arouse the patient from sleep. As a rule, the victim prefers to sit quietly during the attack.

Noisiness and threshing about are exceptional. After the attack passes off most patients state that they feel quite as well as before, although severe attacks may cause a temporary feeling of exhaustion. Nervous patients may feel exhausted after mild attacks.

Much energy and printer's ink have been consumed in the past speculating on the pathogenesis of angina pectoris. The chief value of these learned and frequently controversial essays has been to demonstrate the futility of substituting speculative reasoning for the much more laborious but less flashy procedure of investigation. Our present knowledge of the pathogenesis of angina pectoris is far from complete. Nevertheless, it has been learned, thanks to the use of objective methods, that temporary inadequacy in blood supply to a part of the heart muscle is an important factor in its production.

The diagnosis of angina pectoris is made on the basis of the history; consequently a detailed description of the attacks is necessary. A careful effort should always be made to find some other explanation for the pain. The value of physical examination and laboratory studies is twofold: (1) the search for evidence of cardiovascular abnormalities, and (2) the effort to find other possible causes for the attacks. Thus, if the history conforms reasonably closely to the pattern of angina pectoris, the finding of evidence of degenerative cardiovascular disease, bolsters the diagnosis. Negative examination, however, including negative electrocardiogram and x-ray studies of the heart do not rule out angina pectoris. The effect of nitrites (amyl nitrite or nitroglycerin) may be helpful as a diagnostic test, although it must be remembered that (1) angina pectoris is not the only pain that may be relieved by nitrites, and (2) nitrites do not invariably relieve anginal pains. About half the cases will develop specific changes in the electrocardiogram during attacks of pain, but this procedure is scarcely practicable as a diagnostic aid for general use.

Coronary Occlusion. This condition has been so frequently described during the past few years that it scarcely seems necessary to repeat a full description of it here. It is remarkable how blind we all were regarding

coronary occlusion up to about fifteen years ago, despite the fact that von Leyden had described the clinical and necropsy findings in a series of cases as long ago as 1884. It was not until after Herrick's second paper that interest was aroused. In order to appreciate the remarkable change of thought that has occurred, one needs only to go over old records filed under the diagnosis of chronic myocardial disease. Restudy of these case records, particularly in those in which electrocardiograms were included, reveals that not infrequently the determining factor in cardiac breakdown was an attack of coronary occlusion, although this was not suspected at the time. Our failure to recognize coronary occlusion as a clinical entity a number of years ago makes one wonder what other recognizable conditions are still being missed.

At present there are few practitioners who would fail to recognize coronary occlusion provided the patient had intense prolonged substernal pain, followed by circulatory collapse, fever, leucocytosis, and a pericardial friction rub. It is the cases with relatively minor symptoms that are apt to go unrecognized. Pain of the anginal type and distribution lasting more than a hour should not be dismissed without considering the possibility of coronary occlusion. Circulatory collapse, fever and leucocytosis are frequently absent. These apparently depend more on the extent of myocardial infarction than on coronary occlusion per se. In many cases there is no material drop in blood pressure, no tachycardia, fever, leucocytosis or friction rub.

An electrocardiogram should be made in every case suspected of coronary occlusion. It is at least as important as an x-ray of the chest in a patient suspected of pulmonary tuberculosis. The electrocardiogram supplements but does not replace clinical examination. One must, however, recognize the limitations of clinical examination.

It is not my purpose here to discuss the technical aspects of electrocardiography. The value of this procedure in the diagnosis of coronary occlusion has been greatly increased by supplementing the conventional limb leads with one or more chest leads. Nevertheless, no technique of electrocardiography has been

devised to reveal the present of coronary occlusion unless the circulation of blood in the heart muscle is diminished below its actual requirements. Consequently, if only a small vessel is occluded and collateral circulation is adequate there is no reason why the electrocardiogram should be significantly altered. Prior to the use of chest leads, actual infarction of the heart muscle was frequently missed even during the acute stage. During the past four years since chest leads have been used routinely, in our department, as a supplement to limb leads in the study of cases suspected of coronary occlusion, we have escaped the embarrassment of having the pathologists show us acute infarcts we had missed. Furthermore, there has been no failure to find infarcts at necropsy after the clinical diagnosis had been made. Thus it appears that not only has electrocardiography become a highly dependable method for the detection of acute infarcts but with proper safeguards it is almost equally dependable in ruling out infarction. My colleague, Dr. Francis C. Wood, and I have recently in the *Clinical Concepts of Cardiovascular Disease* published by the American Heart Association, summarized the electrocardiographic criteria that we have found useful for the recognition of infarction.

In addition to the value of electrocardiograms for the study of recent infarction, they have also proven useful in diagnosis of ancient infarction. However, as the scar contracts electrocardiographic deviations fade out and the pattern tends to return toward the normal. Nevertheless, it is exceptional for the electrocardiogram to become completely normal. Only a few days ago I saw a patient who had coronary occlusion in 1928, proven by electrocardiogram. He has had no illness since that time yet his tracing still shows finding pathognomonic of ancient infarction involving the anterior wall of the left ventricle.

It is scarcely necessary to emphasize to this audience the importance of differentiating coronary occlusion from the various conditions with which it may be confused. It is a tragic blunder to operate on a patient with acute coronary occlusion with the mistaken idea that some upper abdominal catastrophe has occurred. It is also a serious error to

permit a man who has had recent coronary occlusion with mild symptoms to continue going about his business. On the other hand, one should not make a mistaken diagnosis of coronary occlusion when none has occurred. Aside from the imposition of a useless prolonged period of rest and equally useless restriction of activities thereafter, the mental effects on the patient may be devastating. It requires almost perfect mental equilibrium to avoid being seriously disturbed by such a diagnosis.

Coronary sclerosis with circulatory insufficiency. The arresting features of angina pectoris and coronary occlusion attract our attention so much that we may neglect the obvious importance of the heart as a pump. The majority of the victims of coronary sclerosis sooner or later develop enough weakness of the heart muscle to lead to circulatory insufficiency. This includes most of the sufferers from angina pectoris and coronary occlusion, except those who die either suddenly or from some intercurrent condition. Consequently, inability of the heart to do its share in getting the blood circulated efficiently is by far the most important end-result of coronary sclerosis. Most of the elderly sufferers from cardiac insufficiency have coronary sclerosis as the background for their condition.

The diagnosis is easy in the advanced stage and need not be elaborated here. It is in the earlier stages when more constructive measures are possible that diagnosis should be made. The symptoms may be quite indefinite in the early stages. The most important are diminished tolerance to exercise especially shortness of breath, fatiguability, digestive disturbances, or heart consciousness. The last may take the form of palpitation, a feeling of fullness or aching. Dizziness or insomnia are sometimes the first symptoms. Occasionally an attack of nocturnal dyspnea may be the first intimation that anything is wrong.

Physical examination may fail to reveal anything of significance so long as there are no evidences of congestive failure. Definite cardiac enlargement, the development of murmurs or arrhythmia which had not been present before, accentuation of the aortic second

sound, elevation of systolic or diastolic blood pressure or what is more significant, narrowing of pulse pressure, should be regarded as danger signals. An intensive study of the first heart sound for many years has convinced us that but little importance can be placed on changes in the first sound as evidence of myocardial damage. When the first sound weakens as a result of myocardial failure, other findings are so conspicuous that he who runs may read.

Perhaps the most frequent mistake made is to place too much reliance on a negative physical examination. The story is frequently obtained from patients with myocardial damage that because of certain symptoms a physician was consulted who made an examination and assured the patient that he could find nothing wrong.

The studies of these patients are not to be regarded as complete until careful x-ray studies of the heart and great vessels and electrocardiograms have been made, although these methods yield little direct information regarding the function of the heart muscle. The important x-ray findings are changes in the size or shape of the heart, alterations in the great vessels and sometimes clouding of the lung fields. Recently progress has been made in the visualization of calcified valves and even calcification in coronary vessels. These findings, however, are of relatively minor importance. Many cases show no cardiac enlargement until failure occurs. As a matter of fact, not a few cases fail to show enlargement even in the presence of failure.

SUMMARY

Coronary arteriosclerosis tends to have a long latent or asymptomatic stage during which its recognition is usually difficult and not infrequently impossible. If, however, degenerative changes in the heart muscle have occurred, there tend to be significant alterations in the electrocardiogram. A survey of a group of executives suggested that latent coronary arteriosclerosis is common after the beginning of the fifth decade of life.

Following the latent stage there may be a stage of comparatively mild symptoms, which although not necessarily characteristic of heart disease should nevertheless arouse a sus-

picion of heart disease in the mind of the examiner.

The chief clinical manifestations of advanced coronary arteriosclerosis are angina pectoris, coronary occlusion, and circulatory insufficiency. The tendency in all cases is toward failure of the heart as a pump. This is the terminal stage unless death occurs suddenly from a vascular accident or from some intercurrent condition.

It is important to recognize the serious limitations of the conventional methods of clinical examination in the diagnosis of coronary sclerosis and its complications. X-ray and electrocardiographic study are essential to supplement but not to replace clinical observation. Recent advances in electrocardiographic technique and interpretation have greatly enhanced the value of this procedure. *36th and Spruce Streets.*

DISCUSSION

DR. O. S. ALLEN (Wilmington): First I want to congratulate Dr. Wolferth. He has covered the subject very thoroughly.

In this last group you showed, I was just wondering if you found that hypertension was associated with that particular type of cardiogram, or didn't they go into that? Do you remember? It was associated with hypertension?

DR. WOLFERTH: In some cases.

DR. ALLEN: Dr. Wolferth is one of the pioneers in this direct lead and he, probably more than any other man in the country, I think, has helped us out quite a bit on that. We routinely make the four direct leads, and I would like to know if we should add six or seven leads routinely. I would like to know, in cases where we really suspect coronary trouble, if he thinks we are justified in taking six, seven, or eight leads, and how much more information may we derive from the six, seven or eight. There is so much controversy at the present time, pro and con, that one hardly knows what to do. But in the four leads I don't think there is any argument about that at all.

There is another thing that is rather confusing to me. I believe it is generally considered that the absence of the down deflection, or the so-called Q wave, that both clini-

cally and cardiographically and in post-mortem work there is not much argument about the patient having had a coronary thrombosis. The confusing thing, though, to me is that occasionally and frequently you get cardiograms that have just a little down deflection and not very much, and I am at a loss at times to know just how to group that, or what status that may have.

I will appreciate it a lot if Dr. Wolferth will clear those things up. It is a great pleasure to have him with us, and again he has covered the subject very thoroughly.

DR. R. W. TOMLINSON (Wilmington): Mr. President and Dr. Wolferth: I feel that I am very deficient in this thing because I am probably saying things which are very trivial to Dr. Wolferth. I have had the privilege of hearing his elucidations at the clinic several times and it has always been with a great deal of pleasure and profit. I think this morning the modesty of his presentation and the lack of going into fineness of detail has been out of consideration of our receptive and appreciative ability. As I sat here and listened to the description of the T wave and the Q, R, S conflicts the thought occurred to me that perchance other men had the same difficulty in appreciating what the portent of those deviations is just as I once did, and wondering if perchance, in the rendition of the report electrocardiographically, it might not be meet and expedient to incorporate in the report just what the definition of those graphic deviations conveys. It is possible for any one of us to achieve a familiarity with the nuisance detail over a broad scope of a field of medicine so that we will all be efficient and cognizant of the portent of just those things that are portrayed.

I remember reading with a great deal of pleasure the article by Dr. Wolferth in conjunction with Dr. Wood and Dr. Bellock, and I think probably Dr. MacMillan was also associated in the technique which was expressed in the taking of the chest leads, and in that text was espoused the fact that in accordance as to where the point of impingement of the electrode that was applied to the anterior part of the chest in intimate or remote continuity with the apex lead, in just so much would you get a probable deviation of the graphic print.

and I wanted to ask him if they still held to that belief.

On the other hand, quite recently I had the privilege of reading an article by Dr. Wolferth relative to the portent of the M wave and the W wave with the coincident expression of the Q wave and probably the subsequent deflection or inversion of the T wave, and I wondered whether the concomitance of that factor was of prognostic import or whether they arrived sequentially, and what we were to gain in looking at the graphs in attempting interpretation.

I do know, from the privilege of basking in the sunlight of the wisdom which pours from his lips, that you had a master discuss this proposition with you this morning, and I am quite sure he can elucidate to the satisfaction of myself and the rest of us present. It certainly has been a privilege to hear him today.

DR. WOLFERTH: Mr. President, Members of the Society: It was not my purpose this morning to discuss the details or technique of electrocardiography. My purpose was to try to help sensitize everybody to the problem of coronary sclerosis and its complications; but since some of my sins have found me out, and various specific questions have been raised about electrocardiography, I will try to answer them as best I can.

In answer to Dr. Allen's question with regard to that last slide I showed, quite a few of this group of patients showed hypertension. I would say—I can't answer that question absolutely, but perhaps a quarter of them did.

There was a group there which had clear-cut evidences of myocardio damage. But out of those 65 cases there were at least 20 cases in which we found no other evidence of heart disease. A lot of them were obtained in the course of surveys of groups of people and we followed them along for years, and some of those people now, after five, eight, ten years, are flourishing just as much as they did then, and what fools we would have been to have given a bad prognosis just because they had an abnormal electrocardiogram.

Dr. Allen asked another question, and Dr. Tomlinson asked a question, and I think both can be answered together. That is, should

one multiply these chest leads? We have done it because we were interested in the problem of investigation and trying to find out just what we could. As a matter of fact, in my opinion one should make tests just as simple as they can be made, and I am quite sure that one chest lead is adequate for routine clinical work. However, Dr. Tomlinson, we still feel that the position of application of the electrode with reference to the heart is important, and if we think that a patient should show evidences of damage and we take an electrocardiographic lead with the electrode applied over the apex and obtain nothing significant, we would move it around a little bit, inside the body of the heart or outside, and occasionally we have been rewarded by getting evidences of damage in those other positions that we did not find in the conventional position. But it is extremely rare.

Another technical question which Dr. Allen asked me was the significance of very small downward deflections in chest leads. In our studies of normal students we have found that some of them have a very small downward deflection, certainly not exceeding two millimeters. That is an extremely small deflection, so we have tentatively accepted that as the dividing line. If this downward deflection is two millimeters we say a normal individual can show that. If it is less than two millimeters we regard it as suspicious for we have not thus far observed it in normal individuals.

Finally, the question—I don't know whether I understood this correctly—does the combination of the M or W wave and the Q-M in Lead 2, plus the Q wave in Lead 4, mean more than one of these alone?

DR. TOMLINSON: The question was whether the incidence of the W wave and the M wave concomitantly with the Q wave is more important than any one of the three manifestations alone, and if you would express to us just what you thought the portent was with the combination of Lead 1 or Lead 2, or together, or alone. In other words, whether it was a dependable criteria as immediate or subsequent evidence of coronary occlusion.

DR. WOLFERTH: I would say no to that. The M or W wave in Lead 2 makes us pick up our ears and study the patient very carefully

with the thought that he may have some damage to the heart. The Q wave in Lead 3 occurs under a great variety of circumstances. It may come as a result of posterior infarction. It may be caused by something no more important than a transverse position of the heart. We feel this Q wave has been tremendously over-emphasized in recent literature.

I suppose whenever you find two pathological findings together it is more evidence of trouble than if you find only one, and perhaps to that extent the combination of an M or a W wave plus a Q 3 wave would be more significant than when alone.

SURGERY OF TUMORS OF THE BRAIN*

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Brain tumors are not malignant in the strictest sense of the word, for they do not metastasize. They may infiltrate the bone or scalp by direct extension, but otherwise they do not spread beyond the limits of the central nervous system. In one particularly active type of glioma, tumor cells may be carried by the cerebro-spinal fluid from one part of the central nervous system to another and produce secondary growths. With this exception, intracranial tumors which have been completely extirpated will not recur.

The neurosurgeon and the patient with a brain tumor must face together one inexorable fact. Unless the tumor can be totally removed, death from that cause, after a longer or shorter period, is inevitable. There are two schools of thought based on this premise. One school advocates the complete removal of all tumors, and unhesitatingly performs wide block dissections in either the cerebral or cerebellar hemispheres in an effort to expose and to excise entirely a widely invasive growth. The second school is conservative and limits attempts at complete removal of invading tumors by free dissection to those situated in the tip of the right frontal, temporal or occipital horns or laterally in the cerebellar hemispheres.

However, the after-effects upon the physical and mental makeup of the patient must also be considered. To leave a patient permanently cured but permanently crippled is a result of questionable merit. The patient might well prefer the alternative of a limited existence under temporarily improved conditions. This is a difficult decision to make but one with which the neurosurgeon is all too frequently faced.

Technically, neurosurgery has progressed so far that there is little increase in operative mortality with more radical excision of tumors; much larger areas of the brain can be excised with little or no after-effects. Procedures considered extreme a decade ago have become almost routine. Gradually, as the surgeon's experience increases, the gap between complete extirpation of the tumor and "recovery" of the patient narrows. Nevertheless, the surgeon should not permit his desire to use the mechanical advances in neurosurgery to override physiologic and pathologic training. It must not lure him into foolhardy attempts to remove invasive tumors from vital parts of the brain by wide excision of adjacent tissue. Neurosurgery's greatest need is for surgeons well trained in recognizing the pathologic type of a tumor, who will control their attempts at removal by their knowledge of the physiology of the area of the brain affected.

From the surgical standpoint, brain tumors can be divided into three great classes: tumors arising from the envelopes of the brain or the arachnoid fibroblastomas and perineurial fibroblastomas; tumors arising from the pituitary gland and from the craniopharyngeal duct, or pituitary adenomas and the craniopharyngiomas; and lastly, most numerous and most important, tumors originating in neuroglial elements of the brain, the gliomas. The tumors composing the first and second of these groups are in the brain but not of it, since their cellular make-up is not of neuroglial origin. They do not infiltrate, but rather force the surrounding brain aside, hollowing out a space for themselves within it. They are encapsulated and their dissection from the brain follows plainly demarcated lines. Furthermore, since they arise from structures found on the surface of the brain, these tu-

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mors are usually more accessible than the gliomas. The arachnoid fibroblastic tumors comprise approximately twenty per cent and the pituitary group another twenty per cent of all brain tumors. The third of these groups, the gliomas, make up from forty-five to fifty per cent of brain tumors. The last named, being composed of glial elements, spread more or less diffusely into the brain. It may be impossible to determine a definite boundary between tumor and normal brain. Adjacent normal brain tissue must be sacrificed to extirpate them completely.

Tumors arising from the brain envelopes are characterized by slow growth and occur from late adolescence to old age. The acoustic tumors always arise from the sheaths of the auditory nerves in the cerebello-pontine angle. The arachnoid fibroblastomas may be found either above or below the tentorium. When found supra-tentorially they are more common in front of the Rolandic fissure than behind it, along the great venous channels, such as the superior longitudinal sinus or springing from the arachnoid fibroblastic cell clusters along the olfactory groove or sphenoidal ridge.

The most common glandular tumors of the brain are those encroaching upon the pituitary region. In this area appear the craniopharyngiomas in children, the chromophile adenomas of the pituitary in adolescents and young adults, and the chromophobe adenomas in adults and elderly persons.

For practical purposes, from the surgical standpoint there are four important groups of gliomas: the glioblastomas, the astrocytomas, the medulloblastomas and lastly a group containing relatively rare types, such as the oligodendrogliomas, ependymomas, spongioblastoma polare and others. The glioblastomas and the medulloblastomas are rapidly growing, extensively invasive tumors, rarely completely removable, and unless wide areas of adjacent tissue are sacrificed, always recurring. These two groups appear commonly in certain brain areas at a definite age, the glioblastomas in the cerebral hemisphere of persons of fifty or sixty, the medulloblastomas in the cerebellar vermis in young children.

The astrocytomas are much less rapidly growing, less invasive, usually partially en-

capsulated, often cystic or calcified. If they can be removed with a minimum of adjacent normal brain tissue recurrence is unlikely. These tumors are found most often in the cerebellar hemispheres of children and the cerebral hemispheres of adults.

The relatively rare gliomas of the fourth or mixed group are all of a benign type and resemble the astrocytomas in their gross characteristics. The oligodendrogliomas are tumors of the cerebral hemispheres, often calcified, and occur in adult life. The ependymomas are benign and slow growing but offer a difficult surgical problem because of their situation in close proximity to the ventricles. The spongioblastomas polare, unfortunately, usually attack the base of the brain and especially the optic nerves, chiasm and tracts, sometimes even the brain stem and cerebellum. Surgical removal is rarely possible.

Broadly speaking, the arachnoid tumors, the pituitary lesions and the gliomas are of most interest to the surgeon. The first and foremost problem to be solved is that of localization. A careful chronologic history of the development of symptoms and a painstaking and thorough neurologic examination, including visual fields, while most important, too often do not furnish sufficiently definite information. Determination of the position of the tumor, as above or below the tentorium, and its lateralization in one or the other cerebral hemisphere is not enough. As accurately as possible, the surgeon must know in which lobe of the brain the tumor lies and whether it is beneath or on the cortex. Since all cerebral tumors are attacked through a bone flap, it is imperative to be able to place the flap so that the tumor lies immediately beneath the center of the opening. In cerebellar tumors definite lateralization is less important because both cerebellar lobes are routinely exposed in a sub-occipital craniectomy; but it is extremely important to distinguish between sub and supra-tentorial tumors because the operative approach to these two areas is so entirely different.

Neurologic findings, while caused by involvement of a definite brain area, nevertheless do not indicate exactly whether the symptoms result from pressure upon that area from behind, from in front, or from within.

A frontal or parieto-occipital tumor may give signs just as suggestive of a motor-cortex lesion as does a tumor situated within the motor area. If, then, the motor region is exposed, the bone flap will be so placed that the tumor lies largely beneath its anterior or posterior edge, a great handicap in its removal.

The most definite information as to the position of the tumor may be afforded by roentgen-ray studies. By roentgen-ray studies, I mean not merely the discovery of calcification in the tumor, bony thickening or erosion suggestive of its position, or changes in the pituitary fossa or pineal shift, which give a clue as to the tumor's whereabouts, but much more important, the study of changes in the size, shape and position of the ventricular system after the introduction of air. Ventriculography is the solution of the first major neurosurgical problem, which is accurate localization. Without question, this method of determining the position of intracranial tumors has done more to extend the scope of neurosurgery and to increase the percentage of tumors successfully removed than any other one procedure. If there is any doubt in the surgeon's mind as to the location of the lesion, a ventriculogram should always be performed.

Once the tumor has been located, an attempt should be made to estimate its character prior to operation. Here the history, the rapidity of onset, the symptoms, the age of the patient, the position of the tumor and the roentgen-ray findings of thickened cranial bones or calcification within the mass are valuable. In the final analysis, however, it is impossible to distinguish in the majority of instances between relatively malignant and benign types. For this reason, every patient harboring a brain tumor should be operated upon, unless the tumor obviously involves the brain stem or is without doubt a metastatic malignant growth from cancer elsewhere.

The details of the operative procedure necessary for the exposure of the suspected area of the brain are irrelevant. A bone flap or a sub-occipital craniectomy have become standard surgical procedures and need no description here. With the exposure of the brain the second great problem in neurosurgery must be met. Of what type is the tumor

and how radical an attempt at removal is justified? Determination of the kind of tumor may sometimes be made by gross inspection, particularly if the tumor be an arachnoid fibroblastoma, but often a glioma, well encapsulated on the surface and with the dura adherent to it may be found upon the cortex and easily mistaken for a meningioma. However, such an error would not make much difference, for an attempt should always be made to extirpate a surface tumor regardless of its type. There are two quick methods available for immediate diagnosis. The first is supravital staining of fresh tissue: (1); and the second is frozen section. The value of these methods for the individual surgeon depends upon experience, but by either the degree of rapidity of growth of the tumor may be determined and a very shrewd estimate made of its type.

The arachnoid fibroblastomas afford the best prognosis of any group of intracranial lesions if they can be removed. These tumors grow so slowly, that if situated in relatively silent brain areas, they may reach very large proportions and yet produce few symptoms. Since arachnoid fibroblastomas arise from the fibroblastic cell nests in the arachnoid, a dural attachment is always found, often in the neighborhood of the great venous sinuses. Consequently, these lesions may in themselves be very vascular or surrounded by large blood vessels. Severe hemorrhage is the most serious surgical complication, although the recent introduction of electrosurgical methods (2) has made possible the removal of these tumors with much less bleeding. After exposure of part of the surface of the tumor, one is able to cut into it with the electric scalpel and scoop out its contents almost bloodlessly. As the tumor is gutted, the walls collapse and it may then be gently separated from the surrounding brain. As the collapsed shell of the tumor is slowly withdrawn, its vascular attachments to the brain can readily be seen and secured. Once the mass is removed and the adjoining cortical areas relieved of pressure, function returns rapidly. Relatively large tumors may be thus removed with little damage to the brain. These tumors, if located at the top of the motor cortex, may give comparatively early symptoms leading to

operation. However, they are rarely operated upon as early as was the patient reported by Spiller and Frazier (3), in whom a small fibroblastoma one and one-half centimeters in size was removed from the motor cortex. Jacksonian epilepsy affecting the arm was the predominating symptom which lead to operation.

Although it is better to remove a brain tumor at the first operation, the surgeon should never hesitate to terminate an attack upon a fibroblastoma, if necessary, and re-operate later. It is much more satisfactory to have a living patient with his tumor partly removed than to have a patient succumb to hemorrhage and operative shock from a complete extirpation. The results following complete removal of fibroblastomas are so good that no unnecessary risk should be taken.

When an arachnoidal or perineurial fibroblastoma is found in the posterior fossa, the problem is again one of accessibility and vascularity complicated by the close juxtaposition of important cranial nerves and vital medullary centers. Unless these tumors be very small, complete removal is rarely possible since they develop very gradually and even a large tumor may give but few signs. However, sub-occipital decompression with partial extirpation gives much satisfactory results for so long a period, that I feel conservative rather than radical methods should be chosen for the handling of fibroblastomas in the posterior fossa. Excision of the outer third of the cerebellum overlying the tumor is advisable as it permits much better exposure. Incision into the tumor and a sub-capsular enucleation constitutes the best method of attack. After the capsule has been collapsed, it may then be possible to free it from surrounding structures. The ninth, tenth, and eleventh nerves may be pushed gently off the lower pole of the tumor. Always the eighth and frequently the seventh nerves must be sacrificed if a total removal is done. If the tumor capsule is tightly adherent to the brain stem, that fragment must be left behind as annoying bleeding and injury to the medulla may follow an attempt at its withdrawal. If section of the seventh and eighth nerves were the only factor that stood between complete and incomplete extirpation

of these tumors, I would sacrifice them unhesitatingly, because hearing is usually impaired before operation and a facial paralysis, which may be repaired later by a facial-hypoglossal anastomosis, is a cheap price to pay for the complete removal of the tumor. Since damage to the vagus or brain stem may so frequently occur in spite of the most careful manipulation and may be so serious, total extirpation is not to be recommended except under the most favorable conditions.

Tumors springing from the pituitary gland, whether adenomas or craniopharyngiomas, should never be completely removed. The danger of damage to what little functioning pituitary gland remains is too great. Furthermore, the posterior part of these tumors impinges upon the third ventricle or mid-brain. Operative manipulation in this region is almost invariably followed by hyperthermia and death. Incision into the tumor capsule, evacuation and collapse, with gentle freeing of the capsule from the adjacent optic nerves is all that should be attempted. The results of this conservative treatment are very satisfactory, especially in the pituitary adenomas. The capsule of the craniopharyngiomas is frequently calcified and stiff, making complete collapse difficult, but since these tumors are cystic the evacuation of the fluid content produces at least partial collapse.

The great test of neurosurgical judgment is provided by the gliomas. The meningiomas afford a relatively simple problem—complete extirpation whenever possible. Pituitary tumors demand a capsular incision followed by sub-capsular enucleation and the removal of sufficient tumor and capsule to free the optic nerves as completely as possible. Total extirpation is recognized as impossible. The treatment of gliomas differs with the variety and position of the tumor and the philosophy of operator. Because these tumors infiltrate the brain, their removal necessitates absolute destruction of brain tissue with resulting permanent disability.

Since the treatment of gliomas depends upon personal experience, I can present only my own opinion. If a glioblastoma is encountered, I confine my attempts at removal strictly to the tumor itself regardless of its position. I do not feel that I have ever been able

completely to extirpate a neoplasm of this type successfully, no matter how far the excision has been carried. The removal should be limited definitely to that tissue which is unquestionably tumor, taking enough tissue to provide for a generous intracranial decompression and augmenting this by removal of the lower two-thirds of the bone flap as well as of the bone at the base of the flap to afford plenty of room for post-operative edema.

If a mid-cerebellar tumor is verified at the operating table as a medulloblastoma, I believe that enough should be removed to unblock the aqueduct and restore cerebrospinal fluid circulation, but complete removal is attended by such great hazards and is so difficult of accomplishment as to be entirely unjustifiable.

The remaining types of gliomas, astrocytoma, oligodendroglioma, ependymoma, etc., I do try to extirpate completely, especially if they are found in the right cerebral hemisphere in a right-handed individual. Enucleation with but little damage to surrounding brain tissue is often possible. When such a tumor is situated in the right frontal, right temporal or either occipital lobe, excision of the entire lobe is justified if complete removal of the tumor can, thereby, be accomplished. Astrocytomas in the mid-line of the cerebellum should be vigorously attacked, as complete extirpation can be done and cure not infrequently results. If a glioma is found in the outer two-thirds of either cerebellar lobe, complete excision is justifiable. Removal of a cerebellar hemisphere leaves very few symptoms provided that the dentate nucleus is not damaged. Gliomas of the motor cortex, whether or not pre-operative paralysis is complete, should be handled less radically. For obvious reasons, I do not attempt block dissections in motor cortex tumors. Extirpation limited to the tumor itself will often restore function, temporarily at least, to such an extent that I feel that a shorter but more useful life is to be preferred to a cure with permanent disability. When the lesion is cystic, as it often is, every effort should be made to extirpate completely the small mural nodule of tumor, regardless of its position.

Unfortunately, the roentgen-ray and ra-

dium have little value for the treatment of brain tumors. In but two groups do either of these agents have the slightest effect. The medulloblastomas and the primary pituitary adenomas may be benefited temporarily; but in the other groups of gliomatous tumors and certainly in the fibroblastomas in which roentgen-rays have been reported as effective, a decompression must certainly have been performed at the time of operation, whether or not the tumor was removed. A decompression over the site of a tumor will, in many instances, be followed by an improvement in symptoms, which if roentgen-rays have been used, is credited to this therapy. To arrive at a correct evaluation of the worth of roentgen-rays in brain tumors, especially when decompression has been done, it is necessary to wait until the maximum improvement has been obtained and evidence of recurrence appears. If, then, following the use of the rays, the clinical picture clears up, the improvement can be attributed to the effect of roentgen-ray treatment alone. If this more rigid standard be accepted but few tumors will prove to be amenable to the roentgen-rays.

The success or failure of a surgical attack on a brain tumor depends primarily upon accurate localization. With the tumor well exposed in the operative field the results hinge upon the type of tumor and the area of the brain involved. Every effort should be made completely to extirpate fibromas and the benign gliomas. Pituitary tumors should be treated conservatively as complete removal is impossible. Furthermore, particularly in the adenomas, roentgen-ray therapy often helps to prevent recurrence. In the widely invasive gliomas sufficient tumor tissue should be removed to allow for an internal decompression, thus compensating for post-operative edema of the brain. Large block dissections are not advisable in either hemisphere because of the later effects upon the mentality.

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BIBLIOGRAPHY

1. Cushing, Harvey and Eisenhardt, Louise: Diagnosis of Intracranial Tumors by Supravital Technique. *Amer. Jour. Path.*, 6:541, 1930.
2. Cushing, Harvey: Electrosurgery as an Aid to the Removal of Intracranial Tumors; *Surg. Gyn. and Obst.*, 47:751, 1928.
3. Spiller, William G. and Frazier, Charles H.: Successful Removal of Brain Tumors. *Arch. Neurol. and Psych.*, 6:476, 1921.

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EDITORIAL

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"CALIFORNIA RESOLUTES"

"The Council of the California Medical Association of January 19, 1935, unanimously adopted a resolution calling upon the Board of Trustees of the American Medical Association to take action to prevent Dr. Morris Fishbein 'from capitalizing upon his position and using it for his personal financial profit.' The resolution directs that the Board of Trustees require 'its paid employee' to devote his entire time to the editorial duties of his office.

"Regardless of any personal feelings we might have toward Dr. Fishbein, either favorable or unfavorable, we consider the California resolution a classic example of rocking the boat in the middle of a storm. It answers that age-old question, 'what's wrong with the medical profession.' Here we are standing at the end of the pendulum swing toward

socialized medicine and California takes the occasion to promote internecine warfare.

"California points out that Dr. Fishbein has for some years been conducting a syndicated health column in the local press of the country and that in addition to his name is appended the title, 'Editor of the Journal of the American Medical Association and Hygeia.' Personally, we think it would be most unfortunate to omit the title. Without the title, Dr. Fishbein's thousands of readers would probably pay little attention to his advice on periodic health examinations, on the danger of patent medicines, on the wiles and pitfalls of quackery, and on many related subjects of extreme importance to the medical profession.

"It is charged that Dr. Fishbein receives financial returns from his column 'to his own personal profit and gain.' So what! Does California resent the fact that Dr. Fishbein is paid for his column? We don't think so. Through his column Dr. Fishbein has acquired an international reputation. This was made possible through his connection with the American Medical Association. The only question involved is whether or not Dr. Fishbein is using his reputation and influence for the best interests of the medical profession. If he is, there is no cause for complaint. If he is not, then California should say so. The question of receiving pay for his health column is mere pettifoggery.

"If Dr. Fishbein should stop his health column, some one would immediately take his place. Every daily newspaper worthy of the name is going to carry a health column, whether it is written by Dr. Fishbein or by the assistant professor of neurocalometry at the Texarkana Chiropractic College. Dr. Fishbein is not engaged in the practice of medicine. He has no incentive to lure patients to his doorstep. It seems to us far better to sponsor and promote the health column of our own editor, than to quit and turn the field over to God knows who.

"We feel that the action of the Council of the California Medical Association is unusually petulant. Even the wording of their reso-

lution, which evades mentioning Dr. Fishbein's name, but speaks of him as 'employed editor' and 'paid employee,' smacks of peevish animosity. It is our guess that all the arch enemies of the American Medical Association will swing with great glee upon the coat tails of the California resolution.

"The resolution was signed by Dr. F. C. Warnshius, secretary of the California Medical Association. Dr. Warnshius was defeated for re-election as Speaker of the House of Delegates of the American Medical Association at the Atlantic City convention last June."

The above editorial, from the *West Virginia Medical Journal* for March 1936, so aptly expresses the feeling of the Delaware doctors that we have quoted it in toto.

Not fifteen minutes ago we turned away from Station WJZ, after listening to "America's Town Meeting," in which Dr. Fishbein debated with Michael M. Davis, Ph. D., the subject of Health Security and the American Public, but which, in the question box that followed, promptly developed into a debate on socialized medicine. Needless to say, it was largely a one-sided debate as to force and fact, a circumstance the audience was quick to grasp, to judge from the applause given to Dr. Fishbein as compared with that given to his opponent. With such a master of exposition and argument, of quip and repartee within the folds of the regular profession we, who are orthodox and who do not underestimate the strength of the enemy, are thankful for Fishbein, and if he, personally, is able to "make something on the side," more power to him! We agree with Dr. Bloss that California's action is "unusually petulant" and exhibits "peevish animosity;" it is one more illustration of the turbulent times that seem to be California's lot these days.

After all, what we need is more of Fishbein and more Fishbeins. The fundamental thought that perturbs us is: what are we going to do when there is no Fishbein?

Surgery of Tumors of the Brain (Concluded from Page 48)

DISCUSSION

DR. M. A. TARUMIANZ (Farnhurst): I don't think there is anything that anybody can discuss, except to express our deep grati-

tude for the wonderful presentation, a masterpiece, of Dr. Grant's paper. I think we should realize that Dr. Grant has reminded us again that we should not be careless in diagnosing brain tumors. Obviously it is necessary to diagnose a brain tumor in the early stage so that the neurosurgeon can attempt to evaluate the time to the best of his practical knowledge. I feel that Dr. Grant has emphasized that point, that we should recognize the brain tumor very early. And second, which he did not mention, which naturally was not ethical from his point of view to mention, but we can realize ourselves that general surgeons should not attempt to do brain surgery. At least that is my opinion and I always have adhered to that particular idea or principle, and have referred all our brain tumors to our staff visiting neurosurgeon, Dr. Frazier or his assistant. I think it is very important for us to realize that and adhere to it. Brain surgery, or neurosurgery, is entirely a specific field in surgery. I do not wish to criticize anyone, but it is quite frequently that we have unfortunate results from a general surgeon's attempt to assist a patient with brain tumor.

DR. W. EDWIN BIRD (Wilmington): I might second what Dr. Tarumianz just said from the standpoint of the general surgeon. I think the old saying is that fools rush in where angels fear to tread. I know I am no angel, but I hope to the good Lord I am no fool.

PRESIDENT NILES: Is there any other discussion? I might say at this time that Dr. Grant has us at a disadvantage. He speaks of a subject upon which the average practitioner looks with awe because of his lack of knowledge of that subject. I am sure I voice the sentiment of this Society when I say we greatly appreciated your talk here this afternoon. Have you anything to add, Dr. Grant?

DR. GRANT: I have nothing to say, gentlemen, except to thank you very much for the privilege of being here and your patience in listening to me. I was a little hesitant about coming down and inflicting brain tumors on even an intelligent group like this because, as Dr. Niles has said, it is a little language of its own, but I think you have been very patient with me, and I want to thank you again for the privilege of being here.

WOMAN'S AUXILIARY: A. M. A.

On February 11th, 1936, a regular business meeting of the Woman's Auxiliary to the Medical Society of Delaware was held at the Academy of Medicine in Wilmington. Announcement was made that the National Convention will be held in Kansas City, Missouri, May 11th to 15th. The next state meeting will be held in April. Mrs. Butler reported 94 garments made for the Visiting Nurse Association since October, 35 of these having been made in January.

After the business meeting tea was served in the library, at which time our guests, the Wilmington City Federation of Women's Clubs, inspected the Academy. Mrs. C. L. Hudiburg was in charge of arrangements for this very successful affair.

On February 18th, a sewing meeting was held at the home of Mrs. Willard Smith, when several new members were present. The next sewing meeting will be held on March 21st at the home of Mrs. Gerald Beatty, 1621 N. Franklin street.

MISCELLANEOUS**Program Completed for Post Graduate Institute**

Fifty-four of the ablest medical educators in a city noted for its medical education—Philadelphia—constitute the faculty of the Philadelphia County Medical Society's Post Graduate Institute, to be held April 20 to 24 in the Bellevue-Stratford Hotel, according to the complete program, just issued.

Considerable interest has been expressed in this undertaking, which the county society hopes to make an annual event, and many physicians already have sent in their registrations. Notices have been sent to doctors throughout Pennsylvania and the nearby States and a large attendance is expected.

Beside the regular program of lectures, those attending the Institute will have an opportunity to hear Dr. Frank Lahey, of Boston, Director of the Lahey Clinic there, deliver the J. Chalmers DaCosta Foundation oration at the Philadelphia County Medical Society's meeting on the evening of April 22.

The Institute's general subject will be cardiovascular and renal diseases, which the essayists will discuss from many angles. One approach will be prevention, to which little

attention was paid by doctors of the older schools, which is recognized as a very practical mode of attack today.

Etiology will receive much emphasis, since the cause and effect relationship between disturbances of the blood vascular and the renal systems is so often demonstrable but difficult to accurately define. The effect of ureteral lesions and obstructions upon the kidneys will be discussed in several papers, also, as will the matter of differential diagnosis among the forms of nephrosis and glomerulonephritis.

Of particular interest to the surgeons will be many of the newer treatments for heart disease, including alcohol injections, cervical sympathectomy and posterior root injections for relief of angina pectoris pain. Such procedures as cutting splanchnic nerve roots, and removal of the suprarenal glands for the relief of essential hypertension, total thyroidectomy for certain heart conditions, section of the sympathetics for Raynaud's and Buerger's disease, wiring of aneurism, etc., also are to be touched upon.

Evaluation of various vaccines employed in bacterial endocarditis, discussion of new methods of using digitalis, use of the various diagnostic aids in both heart disease and renal ailments are other interesting phases of the program.

While the Institute's chief appeal to the doctors in this section of the country should be the lectures themselves, there is an added attraction in that the Institute is being held in a city which has for two centuries been a center of medicine. Since 1717 when John Kearsley began to instruct young men in the practice of medicine its reputation as a training ground for physicians has been of the finest. It boasts the first hospital, the first medical text book, the first clinical medical lecture and many other medical "firsts."

The Philadelphia County Medical Society was suggested at a meeting on December 1, 1848, and was founded January 16, 1849. From the very beginning it took an active leadership in preventive medicine, sanitation, and other things affecting public health. Its second resolution, April 17, 1849, was in the interest of the general practice of vaccination, and the first national sanitary congress took place in Philadelphia in 1857.

Propaganda for Reform

Potency of Ampoules of Pitressin. The Council on Pharmacy and Chemistry reports that in New and Nonofficial Remedies, 1935, the "pressor" potency of Ampoules of Pitressin (Parke, Davis & Co.) is defined as follows: ". . . each cubic centimeter contains 20 pressor units. . . ." Too late for revision of this description, Parke, Davis & Co. informed the Council that the standardization of its product had been changed so that each cubic centimeter was to contain but 10 pressor units. Recently the firm informed the Council that it had decided to restore Ampoules of Pitressin to the original potency of 20 units per cubic centimeter and that therefore revision of the N. N. R. description would not be needed. In order that the medical profession might be informed, the Council has authorized publication of the foregoing statement. (*J. A. M. A.*, February 1, 1936, p. 382).

Trichloroethylene in Angina Pectoris.—A report appearing in the Associated Press news December 30, 1935, contained the following statements:

"Instantaneous relief for the pain of angina pectoris and complete cure for most sufferers from the disease was claimed today by Dr. John C. Krantz, Jr., of the University of Maryland in a report which he read to the American Association for the Advancement of Science. The cure, he said, is a drug called trichloroethylene, one cubic centimeter of which is snuffed into the nose when the pains and heart compression of angina pectoris begin. It gives relief within one second."

An inquiry was sent to John C. Krantz, Jr., Ph. D., professor of pharmacology at the University of Maryland School of Medicine. Dr. Krantz replied as follows:

"My association and I reported at the Section of Medical Sciences of the American Association for the Advancement of Science the mechanism of the action of trichloroethylene in the treatment of angina pectoris, which was studied clinically in the institution of Dr. William Love, Jr.

"It is unfortunate that the Associated Press misinterpreted the presentation and stated that we had discovered a cure for the disease. Dr. Love's patients were relieved in

most cases from the distress and apprehension of angina pectoris by the inhalation of 1 cc. of the drug, morning and evening. I shall be pleased if you will emphasize to those who inquire from you the fact that we have not discovered a cure for angina pectoris."

It may be pointed out that trichloroethylene is a drug to be prescribed with caution. (*J. A. M. A.*, February 8, 1936, p. 485).

There Ought to Be a Law

(Excerpts from an address by Dr. P. H. Dee, Professor of Impractical Political Sciences and Theory of Theories, Anyold College.)

Mrs. O'Grady has pernicious anemia. She is decidedly anemic and it is very, very pernicious. Her income is low, lower than liver is high, lower even than her hemoglobin percentage or erythrocyte count.

What do the butchers intend to do about the millions of O'Gradys now living in this country? Certainly they cannot coldly dodge the issue. They have the liver, the O'Gradys have the anemia. How about a liver-prepayment scheme, compulsory upon all alike? Liver is too high anyhow. The Committee on the Cost of High Livers has shown that liver can be produced at less than present prices, provided the butchers abandon the individualistic profit-system. There ought to be a law.

Tim O'Sullivan has broken arches. He cannot work any longer. The plantar surfaces of his metatarsal arches slap the pavement as he shuffles along. His spirit is lower than his arches. Also he is decidedly low-income.

What do the shoe people intend to do about the hundreds of millions of O'Sullivans? Who is going to provide anterior heels, health-spots, lockes, ground grippers or arch preservers? Have you ever read the report of the High Cost of Low Arches Committee? Do you know that shoes can be made for much less than O'Sullivan has to pay? This matter can be taken care of easily and painlessly by Compulsory Dog Insurance. There ought to be a law.

Old Mr. and Mrs. Leary both suffer from Presbyopia. The oculist, who refracted them for nothing, gave them each a prescription for glasses suitable to their respective conditions. But they, likewise, are low-income. They cannot afford the prescribed lenses.

They have only a single Woolworth pair to share between them. They have to get Mrs. Fogarty to tell them the places and hours of the Townsend meetings.

Both need new upper and lower plates. Mrs. Leary's corset is incompetent, and her husband's truss has failed lamentably of late. His ear-trumpet is cracked and her nail file is lost. How can low-income people, such as these, contend against such hazards?

Are the glass, steel and rubber industries cognizant of the millions of millions of Learys and of the outrageous social injustice that their individual cases portray? Can anyone, in the face of such instances as these, oppose an equitable prepaid insurance against these necessities of security and well-being? Truly there ought to be a law!—*Med. Reporter*, February 15, 1936.

BOOK REVIEWS

The Human Foot: Its Evolutionary Development, Physiology and Functional Disorders. By Dudley J. Morton, M. D. Pp. 244. Cloth. Price, \$3.00. New York: Columbia University Press, 1935.

This monograph is divided into three parts. The first deals with evolutionary data extremely interesting and instructive, concise and related in a pleasing manner. The second part deals with physiology of the human foot as it has finally evolved to its present form. It stresses the formation of the boney longitudinal arch as well as the equally important plantar fascia which is considered a necessary counterpart to the boney arch. This arch is divided into components each one of which includes one metatarsal. If for any reason one of these component arches is not so constructed that the exact amount of weight is thrown upon it at the time that the weight is thrown on the other components then there results a foot strain. This is seen best in the short first metatarsal where the results of an incomplete weight thrust throw an excessive amount of weight on the second metatarsal which consequently enlarges. The third portion deals with special methods of treatment based on the etiology outlined above.

The book as a whole is quite valuable to anyone interested in the problem and would benefit many a general practitioner who is constantly being called upon to advise for arch strain.

The Doctor

When you don't feel well
Whom do you tell?

The doctor.

Who gives you pills
And cures your ills?

The doctor.

Who looks at your tongue
To learn what is wrong?

The doctor.

When your fever runs high
And you think you'll die

The doctor

Pulls you through
And what do you do?

For the doctor

You take his pills
That cure your ills
And make him wait
You pay him late.

Now doctors too
Must live you know

And he must keep
His wife and "sheep"

He too has bills that he must meet
So pay him now, let me repeat

That freed from pain you now can smile
So remove your name from Doc's bill file.

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CANNED FOODS AND THE PUBLIC HEALTH

III. Chemical Preservatives

• Some of our readers have inquired as to whether or not chemical preservatives are used in commercially canned foods. In certain instances, this question was inspired by the fact that "canning compounds" were formerly sold for use in home canning and preserving operations. Such compounds, however, are rarely used by the housewife of today, and never by commercial canners.

We wish to state here that *no preservatives are used in commercially canned foods.*

Spoilage of food is principally caused by the growth and multiplication in food of microorganisms such as yeasts, molds, or certain types of bacteria. These microorganisms depend upon the food they inhabit for their nutrition and their life processes produce changes in the chemical or physical characteristics of food, or both. These changes lead us to state that the food has "spoiled".

Like other living organisms, these spoilage microorganisms can grow and multiply in a food only as long as conditions remain favorable for their existence. If any environmental factor, such as temperature, moisture or acidity, becomes unfavorable, these spoilage organisms are destroyed, or their development is inhibited.

All methods of food preservation have a common underlying principle; they all alter some factor or factors in the food environment so as to render conditions unfavorable

for the growth or development of spoilage organisms in the food.

Thus, foods may be preserved by freezing or refrigeration, which serves to lower the temperature below that optimum for growth of certain spoilage organisms; dried foods keep because the moisture content has been reduced to an unfavorably low level; certain fermented foods keep because of the development of high acidity. All of these methods produce changes in the environment in which the food spoilage organisms must live.

Commercial canning is a method of food preservation in which the temperature factor in the environment is raised to a level above that optimum for growth of spoilage microorganisms. Thus, canned foods keep because in their preparation they are subjected to heat processes in hermetically sealed containers. The thermal processes raise the temperature of the foods to those temperatures at which the most resistant spoilage organisms present cannot grow or survive. (1)

The hermetic seal insures protection against future infection of the food by such organisms.

Thus, commercial canning is a method of food preservation which has for its basis the thermal destruction of spoilage organisms; no chemical preservatives are needed to insure preservation of the foods, and, consequently, none are used.

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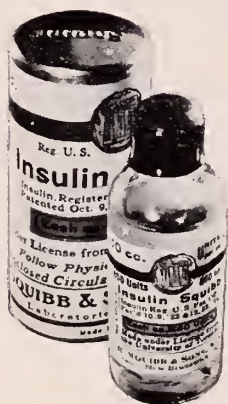
(1) The Microbiology of Foods, F. W. Tanner, Twin City Pub. Co., Champaign, Ill., 1932

This is the eleventh in a series of monthly articles, which will summarize, for your convenience, the conclusions about canned foods which authorities in nutritional research have reached. We want to make this series valuable to you, and so we ask your help. Will you tell us on a post card addressed to the American Can Company, New York, N. Y., what phases of canned foods knowledge are of greatest interest to you? Your suggestions will determine the subject matter of future articles.



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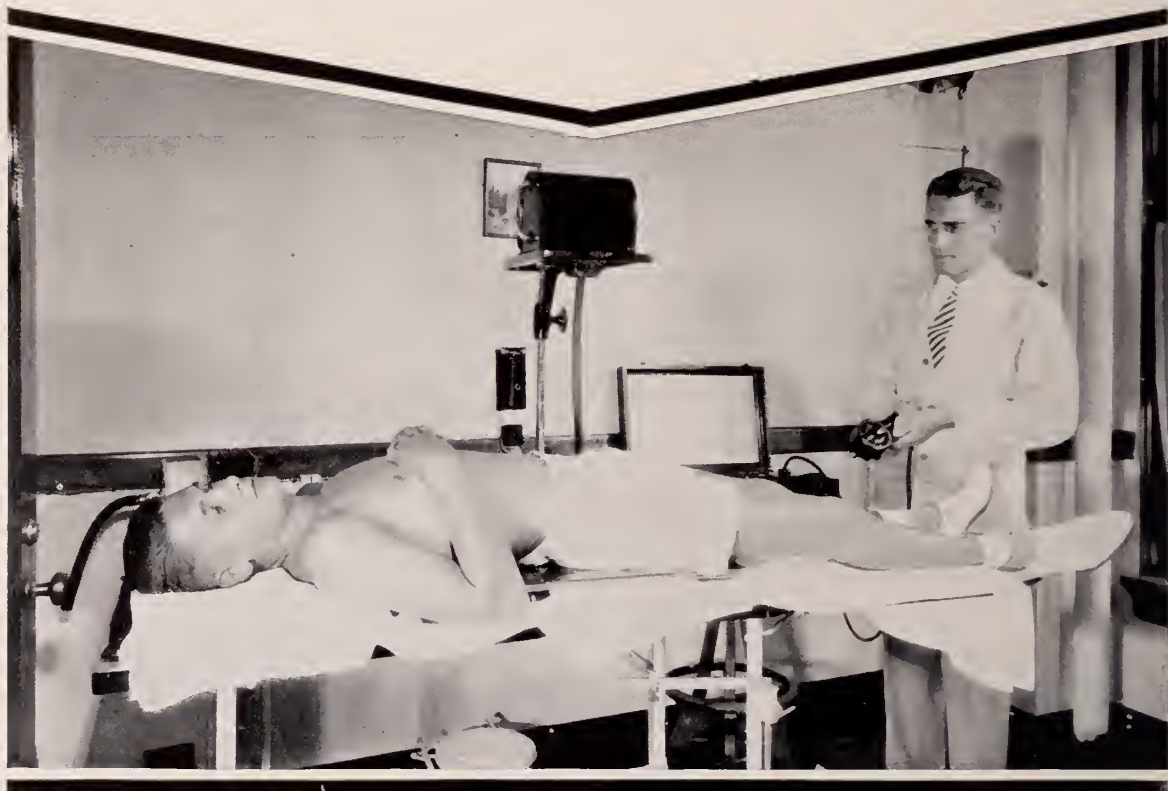
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10:00 A.M.	Breast	Breast	Bottle	Bottle
2:00 P.M.	Breast	Bottle	Bottle	Bottle
6:00 P.M.	Bottle	Bottle	Bottle	Bottle

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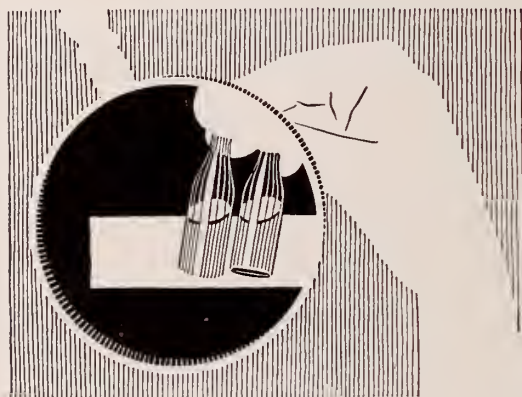
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THE CONSERVATIVE VERSUS THE RADICAL TREATMENT OF FRACTURES*

HUBLEY R. OWEN, M. D.**
Philadelphia, Pa.

There has been a marked stimulation of interest during the past few years in fracture treatment. This added interest is due to the increasing number of fractures, to fracture symposia at medical and surgical meetings, to the work of the Fracture Committee of the American College of Surgeons, to the activity of regional fracture committees, and to a popular demand for better end-results.

The diversity of methods and the ever-increasing paraphernalia and armamentarium for the treatment of fractures are somewhat confusing. Until a comparatively few years ago the methods of fracture treatment were mostly conservative, consisting of wooden or plaster-of-Paris splints, Thomas splints for treatment of fractures of the upper extremity, the application of traction on the soft parts with a Thomas splint for fracture of the femur, and the inadequate fracture box for fracture of the lower extremity. Radical treatment or open reduction was largely reserved for delayed and non-union. To these methods have been added skeletal traction with the use of Steinman pins, calipers, Kirschner wire, the Boehler technique, the Soutter apparatus, the Roger Anderson splints, Smith splint, and many others. Advocates of open reduction employ the Sherman plate, silver wire, metallic bands, nails, screws, bone pegs, bone transplants, and pin.

A visit to the fracture ward of one hospital will disclose the fact that the treatment of fractures is confined largely to conservative measures. One may find at a second hospital

that the majority of the fractures are treated by early open reduction. Equally good results may be obtained by either one of these plans of treatment. It is a question on which method gives to the individual surgeon the best results. An excellent idiom for the treatment of fractures is that the method of treatment must be suited to the individual fracture and not the fracture suited to one method of treatment. One should not be carried away by the enthusiasm of each innovation. There must be some happy medium between the ultra-conservative and the ultra-radical methods. By the conservative methods I imply the fixation of fractures by any form of external splinting and by skeletal traction. By the radical treatment is implied the open reduction with internal fixation.

There is no branch of surgery in which experience is a greater asset than with the treatment of fractures. Time has long since passed when an unreduced Colles' fracture can be treated by the application of a Bond splint for a period of four to six weeks, when a fracture of the femur with marked overlapping of the fragments can be managed by traction on the soft parts, or when a satisfactory result may be expected by treating a fracture of both bones of the lower leg in a fracture box. We assume that all surgeons are at present cognizant of certain cardinal points in the treatment of a fracture:

1st—That fractures require immediate surgical attention; that emergency treatment entails the proper application of the Murray-Jones splint for fracture involving the long bones of the upper extremity and a Keller-Blake splint for fractures involving the long bones of the lower extremity.

2nd—Immediate x-ray study.

*Read before the Medical Society of Delaware, Wilmington, October 9, 1935.

** Instructor in Surgery, Jefferson Medical College.

3rd—Reduction with local, spinal or general anesthesia.

4th—X-ray study after reduction.

5th—Careful supervision, preferably under the same surgeon, of the fracture during the entire convalescence.

These fundamental and imperative procedures will be demanded by the patient. The lack of the necessary teamwork and apparatus in any hospital to carry out these procedures may rightly be condemned.

With the treatment of a fracture, as with the treatment of any other surgical condition, I have always remembered the teaching of Dr. J. Chalmers DaCosta to the effect that: "The surgeon should place himself in the patient's predicament and employ the method of treatment which he would desire to be applied to himself." I have occasionally wondered whether the surgeon who advocates ultra-radical procedures in cases of fracture would allow similar procedures to be applied to himself. My experience with the treatment of the medical profession as patients is that they usually desire very conservative treatment.

With adequate apparatus and its proper application a large majority of fractures can be successfully treated by conservative measures. A surgeon may be handicapped in the proper management of a complicated fracture because of the lack of proper hospital equipment. This lack of equipment is poor economy, as by proper equipment in many cases the patients' hospital days can be materially lessened.

An important point in the discussion of the conservative treatment versus the open reduction of fractures is the time element between the injury and the open reduction. It should not require a number of weeks to determine whether the fragments of a fracture can be satisfactorily held by conservative measures. In the treatment of a great majority of such fractures the surgeon should be able to determine within three or four days whether or not he can succeed in obtaining satisfactory apposition of the fragments by means of conservative measures. If at the end of this time such conservative measures have failed, open reduction should not be post-

poned. This is the most important point which I desire to emphasize. Far too often weeks are lost by repeated manipulations before the decision is finally reached that the fragments cannot be held by conservative means. Every attempt at manipulation of the fragments increases the likelihood of delayed or non-union. Internal fixation by open reduction undoubtedly allows earlier active motion of neighboring joints.

Whereas "each onto himself must be his final rule," we might consider briefly some of the problems in the treatment of the individual bones to emphasize the principle of choice between the conservative versus the radical treatment of a fracture:

In a fracture-dislocation of the head of the humerus, as in all other fractures, the age and occupation of the patient must be considered. In a young or middle-aged patient who must perform laborious work open operation for the restoration of the head of the bone within the glenoid fossa, if such procedure is possible, or removal of the humeral head can be advocated more readily than if the patient is elderly or employed in a sedentary occupation.

Fracture of the middle of the shaft of the humerus offers one of the great problems in the treatment of fractures because of the incidence of delayed and non-union. It is impractical to suggest any one form of treatment for this type of fracture. I desire to again emphasize that, provided conservative methods fail to hold the fragments in satisfactory immobilization, open reduction with some form of internal fixation should be attempted at an early date.

In fractures of the lower end of the humerus, especially those involving the condyles and more especially the inner condyle, the deformity and the morbidity of these cases can be greatly reduced and the likelihood of ankylosis of the elbow lessened by early fixation of the condyle by means of a nail, screw or pin. Such fixation permits earlier active motion of the elbow. Open reduction with fixation of the internal condyle of the humerus will be less likely to be followed by loss of the carrying angle. There is another important point to emphasize concerning fractures

about the elbow joint; namely, that ischemic paralysis is less likely to occur following open reduction than by prolonged traction with various forms of external splinting.

In speaking of the treatment of these and other fractures included in this paper I am not referring to fractures in childhood. Nature is especially kind with fractures in children. Measures may be employed with childhood fractures, whereas if we applied the same measures in like fractures with adults the end results might be disastrous. It is rarely necessary to employ open reduction in fractures sustained by children.

Fracture-dislocation of the head of the radius usually requires open operation with the removal of the head of the bone. Otherwise the head is likely to become a foreign body and interfere with the future usefulness of the elbow joint. After the removal of the radial head there is a tendency for the development of myositis ossificans. In order to minimize the danger of this complication it is well to encircle the upper end of the remaining fragment of the radius with a strip of fascia or Baer's membrane.

One who treats a large number of fractures must be careful not to expose himself too frequently under the fluoroscope, but I know of no fracture which is more satisfactorily treated with the use of the fluoroscope than fracture of both bones of the forearm. A large majority of these cases can be reduced under general or local anesthesia and held well with moulded plaster-of-Paris splints. If conservatism fails open reduction should be attempted and internal fixation applied. The use of wire or non-absorbable suture material for fractures of the bones of the forearm is unsatisfactory. A Sherman plate or the diamond graft of Gallie is preferable. I have not as yet had sufficient experience with the new Roger Anderson apparatus for the reduction of both bones of the forearm. My only objection to this apparatus is that it entails the application of circular plaster-of-Paris, the use of which I rather dislike.

Colles' fracture can usually be satisfactorily reduced if the fracture is reduced early under a local or general anesthetic. If such reduction cannot be made by conservative

manipulation, open reduction should be instituted.

Compressed fractures of the vertebrae unassociated with pressure upon the cord can be treated conservatively by hyperextension. I do not advocate the Hibbs operation or any modification of the Hibbs for this type of injury. In the case of a compressed fracture associated with cord injury with a crush fracture of the spine fixation by means of bone-graft or the Hibbs operation is preferable to the conservative method of treatment.

Fracture of the neck of the femur involves so many problems as to the age, occupation and general physical condition of the patient that to properly evaluate the various methods of treatment for this particular injury would require a lengthy paper in itself. The end result of this type of fracture depends largely upon the blood supply to the proximal fragment, a problem which the surgeon can only surmise by the age and general condition of the cardiovascular system of the individual patient. The conservative treatment of fractures through the narrow portion of the neck consists largely in the application of the Whitman cast or one of its modifications. The nursing care is simplified and the general condition of the patient improved by the use of this type of cast rather than by the antiquated treatment with sand bags or Buck's extension. When the patient's age and general physical condition will warrant, the operative treatment offers the advantage of better anatomical reduction and firmer immobilization. This operation, which consists of a fixation of the fragments by various means, such as nails, pins, beef-bone, ivory and autogenous pegs, is technically difficult and should only be attempted by those who have gained experience through association with those who are thoroughly familiar with the technique of the operation. Of these various methods, I believe that the Smith-Peterson technique offers the best result with the least amount of additional shock.

The treatment of a fracture of the shaft of the femur at its different levels taxes the ingenuity and the experience of the surgeon. Fractures of the femur demand a larger variety of apparatus and appliance at one's dis-

posal. In dealing with a fracture of the femur the same rule holds true as in a fracture of any other bone of the body; namely, that conservative methods should first be attempted. Conservative measures include manipulative reduction, reduction by the Boehler technique, by the Anderson well-leg splint, by Russell extension, by skeletal traction with the use of calipers, Steinman pins and Kirschner wire. Traction on the soft parts will seldom suffice, excepting with fractures in children or in those cases with a minimum amount of overlapping of the fragments. The proper choice of one of these conservative measures may suffice. If the conservative treatment by one of the above-mentioned methods fails, open reduction must be attempted. The Sherman plate, the removable screw of Carrell, Parham bands or other means of internal fixation may be employed, depending upon the character of the fracture. The Parham band must usually be removed after union is obtained. With the use of plates and screws for internal fixation it is imperative that only those plates and screws approved by the United States Bureau of Standards be utilized.

A few words will suffice in the discussion of the conservative versus the operative treatment of fractures of the patella. Conservative treatment should be employed only in those cases of fracture with slight separation of the fragments and minimum tearing of the extensor tendon and capsule. Open reduction for fracture of the patella is unassociated with shock and renders not only a stronger knee but also decreases the morbidity.

The reduction of fracture of both bones of the leg may be attempted by one of several conservative methods, by traction and manipulation with the use of the Boehler apparatus, by the use of the Roger Anderson apparatus, or by skeletal traction. If, again, reduction is impossible either by manipulation or traction, open reduction with internal fixation, with the use of a Sherman plate, should not be delayed. Early weight-bearing with the use of a proper brace is strongly advocated in the case of fracture of both bones of the leg. Since we have employed early weight-bearing we have had no case of either delayed

or non-union in fracture of both bones of the lower leg.

The problem of Pott's fracture is very similar to that of Colles' fracture. If the Pott's fracture is reduced early under a general anesthetic a good result is usually assured. Many cases of Pott's fracture are not properly reduced. The unreduced lateral or upward dislocation of the astragalus results in a wide, weak, painful ankle. Skeletal traction on the os calcis may be indicated. The only operative procedure which I have found necessary has been tenotomy of the tendon of Achilles. This method is condemned by some surgeons, but I have found it essentially useful.

It is hardly within the province of this paper to discuss the question of the various forms of treatment of compound fracture, the relative merits of the Orr treatment, the instillation of Dakin solution by the Carrell technique and the question of debridement with primary or secondary closure of the wound.

What are the dangers of over-conservatively treating a fracture; that is, by attempting conservative treatment over too long a period of time?

1st—Too many attempts at closed reduction may be a causative factor of delayed or non-union.

2nd—Too many attempts at closed reduction cause a greater amount of discomfort and shock to the patient.

3rd—The use of prolonged external traction or splinting prevents sufficiently early active motion of the neighboring joints.

What may be considered the dangers of open reduction?

One should not hesitate to operate upon a fracture because of the fear of infection. If technique is properly carried out there should be no more danger of infection in performing an open reduction than in performing a laparotomy. The Lane technique is emphasized, but I do not believe that it is as necessary to carry out the details of the Lane technique as it is to treat the soft tissues gently, not to allow forcible traction, and to check all hemorrhage.

The open reduction with the use of plates has been decried because of the possibility of

breaking or bending of these plates. If proper plates are used—those approved by the Bureau of Standards—this complication is greatly minimized.

To summarize the more important points of the conservative versus the radical treatment of fractures we would emphasize:

1st—Immediate splinting of a suspected fracture—"Splint 'em where they lie."

2nd—The earliest possible fluoroscopic or x-ray study of the fracture.

3rd—An early attempt at reduction and fixation of the fragments under local, general, spinal or nerve block anesthesia.

4th—If after a fair attempt conservative measures fail, open reduction with internal fixation of the fragments.

5th—Do not delay radical procedures for too long a period of time.

319 S. 16th Street.

DISCUSSION

DR. I. L. FLINN (Wilmington): I appreciated very much Dr. Owen's paper. I have heard him before and he always gives the same sort of talk.

There isn't much to discuss so far as the paper is concerned, except that I did appreciate very much his casting a slam at the fracture box. Speaking on that particular subject, I have seen lots of cases here that have had nothing but linear fractures, especially in the lower part of the tibia, linear either oblique or transverse, where they have been put to bed within a fracture box for two or three weeks until the swelling has gone down, and then a circular plaster cast has been applied and the patient been allowed to leave the hospital. In several of those cases the x-ray taken just before the plaster cast had been applied showed a deviation from the anatomical line. The reason I bring it up is that it seems to me to be exceptionally bad economies. With a linear fracture it is perfectly simple to put the plaster cast on immediately and send the patient home in three days' time, thereby costing the patient or the hospital the difference between that and two weeks' time. I have asked several people about this particular thing and why they

waited, and the argument was that you waited until the swelling had gone out because if you put the plaster cast on immediately it would be so loose it wouldn't be any good. That seems to me to be an exceptionally poor argument, for after all, the cast is held by the bony prominences of the foot and knee, and what happens to the plaster cast in between doesn't matter provided you have the fixation points above and below the fracture site. It strikes me as poor economy to use the fracture box. I appreciated the paper very much.

PRESIDENT NILES: Is there any other discussion of this paper?

At this point I would like to ask one question. I noticed that you had one case here with a non-union of the arm. I would just like to know how you get away with those things in Philadelphia? We couldn't do it here. (Laughter) That is a question I would like to have you answer.

Is there any other surgeon who would like to tear this man's paper apart?

DR. JAMES BEEBE (Lewes): I haven't much to say. As Dr. Owen has said, we are situated along the stone road where the automobiles are turned over and we see a number of cases of fractures, compound fractures of the leg, and so forth.

I believe what he said about the conservative treatment. Of course we have the advantage of the advice of one of his colleagues, Dr. Hearn, as well as Dr. Flinn, and they both agree pretty much on the conservative treatment with skeletal fractures and fixation of the spine. I might say that in the last four or five months we have had six fractures of the cervical spine with a lot of cord injury, and with conservative treatment all but one of them is apparently going to make a gradual recovery.

PRESIDENT NILES: There is one other question I would like to ask Dr. Owen. This dislocation of the os calcis, the heel business, backward. Do you find they are most common in men who fall from telephone or electric light poles? I don't know much about it myself, but the reduction of that by the sledge hammer method is interesting to me. I happened to see one of those cases, and this man too had fallen from a broken telephone

pole. When Dr. Flinn walked in with a sledge hammer, you can imagine, being as timid as I am, just what happened. At that time I thought of Dr. Tarumianz and immediately felt it was a case for a psychiatrist. But the operation was successful and I believe he gained at least seventy-five per cent recovery.

Is there any further discussion of this paper?

DR. J. C. PIERSON (Wilmington): It is always stimulating to me to hear Dr. Owen. I have heard him several times. He speaks from such a large experience and with so much enthusiasm and we know we can get some benefit from his comments.

It is natural, I think, that we won't agree on all the particulars that he presents. I think the treatment of fractures allows of some individuality, not only on the part of the fracture itself, it is very necessary to individualize the fracture, but it also allows of some individuality on the part of the surgeon treating the fracture.

I am heartily in accord and would like to add my emphasis to the immediate reduction of fractures, whether it is by the application of skeletal traction which implies a gradual reduction over a muscle pull, or whether it is a fracture around a joint where you immediately reduce it and apply your splint.

Dr. Owen spoke about fractures of the ankle joint. I think we can extend the immediate reduction method sometimes to both bones of the leg. There are some fractures of the tibia and fibula that can be reduced and splints applied immediately, and after a few hours in the hospital they can be returned home and saved a prolonged period in the hospital. I enjoyed the paper very much.

PRESIDENT NILES: Now, Dr. Owen, I will give you a chance to defend yourself.

DR. OWEN: I don't think there has been enough argument and fighting to defend. I am sorry there wasn't more controversy.

As far as the question of suits for damage are concerned, I am in a very fortunate position in that regard in the treatment of these cases. In the first place, with our policemen and firemen, compensation is paid. They receive full pay for all injuries. The hospital

bills are paid. The services are rendered gratis as far as the surgeon is concerned for they go to a ward in the Philadelphia General Hospital, and as yet, none has sued me for malpractice.

Regarding the question of fractures of the os calcis, I believe you answered that question yourself. I think if we get the fractures of the os calcis early and immediately get out the sledge hammer, in a large percentage of the cases we can get an adequate reduction.

I think you will find that in the paper itself, if some time in your leisure moments you want to read it, I brought out a lot of points that time will not permit me to emphasize this morning.

SOME UNCOMMON BONE LESIONS*

B. M. ALLEN, M. D.**

Wilmington, Del.

Mr. President, Members of the Society: I am glad Dr. Niles said that before I got through with my cases instead of afterward for he won't have the opportunity when he sees the mistakes we make. In thinking about writing a paper to give before the Society I thought it would be much better if I would present a few cases demonstrating the difficulties we encounter in diagnosing bone lesions.

In checking over the cases we have had, I have selected a few which presented problems to us, and it seems to me the more we do along x-ray lines the more problems we have.

(Slide) The first case is that of a girl, seventeen years old, white. In 1932 she began having pain around her left knee. That was practically all the symptoms she had—pain around the left knee. She had not to her knowledge had any fever. She noticed the pain getting more frequent and worse at night. Finally she came to the hospital, in January of 1935, which was practically three years after the onset of the symptoms.

The first film to the left is the original film we took. You notice the spindle-shaped deformity of the fibula, in which the cortex is involved, expanded, and the periosteum is

*Read before the Medical Society of Delaware, Wilmington, October 9, 1935.

**Roentgenologist to the Delaware and Homeopathic Hospitals, Wilmington.

thickened, and also, on close observation, you can observe the fact that the periosteum seems to be raised from the cortex.

In a girl seventeen years of age with a spindle-shaped deformity, pain coming on worse at night, one of the first things you want to think of is: an infection or a type of neoplasm? Always in the attempt to find the unusual you sometimes jump to conclusions and make a diagnosis which is not otherwise substantiated. In this case we thought we had all the indications of endothelial myeloma. On that diagnosis, before any biopsy was done, the patient was given 3850 roentgens over a period of about two weeks, I believe.

Here is where a therapeutic test comes in for a roentgenological diagnosis. If that were an endothelial myeloma it should have regressed very rapidly, especially with such a tremendous amount of radiation as she got, which was almost 4,000 R. Instead of that, there was practically no regression at all in the tumor.

So that, when we saw the second film and the third film, then we felt our original diagnosis or suspicion of endothelial myeloma was not correct. Since the child had gotten this radiation and there had been no reduction in the size of the tumor, we thought it best then to do a biopsy.

A biopsy was done and the defect which you see here is the result of the biopsy. Dr. Flinn did the biopsy and it was examined by Dr. Gay, and then was sent to New York and then to Baltimore. One of the pathological reports said it was chronic osteitis; the second said it was simply benign bone dystrophy; the third said it was a sclerosing type of osteomyelitis—which we think this is, the so-called Gare's type of osteomyelitis, or the non-suppurating type.

The men who have had experience with this type of osteomyelitis say these children get along as well without treatment as with it, so that, on these subsequent films here we think there has been some reduction in the size of the spindle-shaped deformity of the fibula, but since those men who have had experience say they disappear just about as well without treatment as they do with it, we can't give radiation much credit for the reduction

in size. At the present time she has no pain and she is going around doing as she pleases.

(Slide) Case 2. I had one case originally and Dr. Hines kindly loaned me another to show the direct opposite of the condition we have here.

In osteogenic sarcoma we have four main types. We have the periosteal, the subperiosteal or medullary, the sclerosing, and the telagentic. This case is of the sclerosing type of osteogenic sarcoma in which there is a marked eburnation of the bone, which in this case is the right ilium. We think it originated in the right ilium, and we think we can see (the hip joint is clear) the characteristics of this, beside the marked ivory-like appearance of the ilium itself, the radiating striations of bone which you see projecting into the soft tumor mass. These cases metastasize very early into the lungs, so always take lung pictures to see if there is any metastasis. This boy shows no metastasis.

As I say, Dr. Hines loaned me this case to show the direct opposites. (Slide) That is the type of osteogenic sarcoma which is highly malignant and usually proves fatal earlier than the first one. Dr. Hines' case was a man who had noticed pain in his shoulder only three weeks before admission to the hospital. He gave no history at all of any injury. A biopsy was done and a diagnosis was made, and there was an immediate amputation of the entire shoulder, I think, including a part of the scapula and the outer part of the clavicle. The man died four months afterwards from metastasis to the lung. That is what usually kills these patients with osteogenic sarcoma—metastasis to the vital organs of the body.

By the way, I meant to say something else about this sclerosing osteoblastic type of osteogenic sarcoma. The therapeutic test was applied, and Dr. McElfatrick has given a total of around 5,000 R, and I think there has been no reduction in the size of the tumor.

(Slide) The third case shows how we can all be misled. This child is fifteen years of age. In March 1934, the patient developed pain in the left knee which soon became severe enough to confine her to bed, at which

time she was found to have a low grade fever and was admitted to a hospital outside of this city under a diagnosis of rheumatic fever. She remained in the hospital three months, during which time fever and loss of weight, weakness and progressive anemia continued. X-ray examination of the chest showed pathology in the left lung, the nature of which, the roentgenologist said, was uncertain. On the final examination attention was drawn to the pelvis and they x-rayed the pelvis. By the way, the final examination was postmortem—these are all postmortem films.

We find an extensive bone lesion here, and we present this as a case of endothelial myeloma in which we think the primary lesion was in the left ilium. Then you see this tremendous amount of involvement of all the bones of the pelvis, and you see the involvement of the bones of both shoulders, and an extensive metastatic mass in the left lung and several small ones on the other side.

These endothelial myelomas occur in early life. There is one case reported in the pelvis at eighteen months. More than fifty per cent of the cases occur before the twentieth year. They usually begin with dull pain in one bone, accompanied by intermittent attacks of fever and a progressive anemia. That is one of the distinctions between the two types. That is, osteogenic sarcoma is usually localized, destroying bone and forming new bone in the soft tissues beyond, and does not metastasize to other bones, whereas the endothelial myeloma does. They both metastasize to the lungs.

(Slide) This fourth is an interesting case. I have talked with several pathologists and have looked in the literature, and have talked to people who have had extensive experience and they can't recall any cases in which we have had this combination. This is a man thirty-four years of age. In 1931 he noticed he had a swelling of the glands of the right side of the neck. Almost immediately on top of that he developed a swelling of the glands of the left side of the neck. He was treated by deep therapy for those glands on the left side, in the hospital. It was in 1931 he noticed the swelling which was treated and regressed.

He was admitted to the hospital in April of this year, at which time he had a general

adenopathy of all the glands of the axilla and groin, he had a very much enlarged spleen and an enlarged liver, and was very cachectic in appearance. His red cell count was 2,530,000, showing an advanced anemia, and his white cell count was 7,300, which was about normal. He had marked loss of weight. He was treated over the spleen. We first thought it might be a case of lymphatic leukemia. Then he noticed in the early part of 1934 that he began to have some trouble with the left hip, and at the time he entered the hospital he showed this enlargement, this boggy-like condition of the left hip. So we took some films of his pelvis and here is what we find.

We find an irregular destruction of the bones of the left ilium down to about midway in the left femur. To all intents and purposes, from the x-ray alone the diagnosis of carcinoma could be made, but with this generalized adenopathy it made us a little doubtful about this being a secondary carcinoma.

While in the hospital he developed pain in the lower dorsal region, so we took a film of the dorsal region and found he had a destructive lesion in the twelfth dorsal vertebra. The biopsy shows this to be a case of lympho-sarcoma with bone invasion, and the bone invasion is the unusual part of this case. Usually it will invade the vital organs and not the bones. That is the point I talked with several men about and they couldn't remember any case where they had had bone invasion from a general case of lympho-sarcoma.

Of course, this must be differentiated from Hodgkin's disease. That is an important point, I think, because frequently you get these mediastinal masses extending out like this and it is difficult to say whether it is lympho-sarcoma or Hodgkin's disease, but I think one point is to ask the patient whether she has pruritus.

A patient came to me and she had large lymphoid nodules extending on both sides of the neck for which she had been treated and had a somewhat distorted mediastinal mass. I said, "How long have you had this?" She said, "For two years." I frequently ask patients what were the first symptoms they had, and so I asked this patient: "What did you

go to the doctor for the first time?" She said, "I went the first time because I itched all over my body."

That is a very, very important symptom in Hodgkin's disease. We don't know why, but if you get a glandular enlargement here, plus a generalized itching, the chances are that you are dealing with Hodgkin's disease.

(Slide) The fifth is a case that we thought we got very early. The patient is white, aged sixteen. He noticed several nodules on his head in July 1934. He did not consult a doctor until October 1934, and the doctor made a biopsy of one of these nodules, which was examined by Dr. Gay. Dr. Gay made a diagnosis of endothelioma arising from lymphoid tissue or bone. I want to congratulate Dr. Gay on that very accurate observation, as after later events it turned out to be. Those slides were sent to New York and the pathologist made a dissenting diagnosis and called it mycosis fungoides.

He was admitted to the hospital April 17, 1935, stating that he had had pain in his right knee for six weeks previous to his admission. With no particular idea as to there being any connection between the scalp nodules and the knee, the admitting doctor had his right knee x-rayed, and we were rather surprised to find here, immediately above the condyles of the femur, a localized area of destruction beginning in the cortex. Right away we thought, here is a boy sixteen years old with a purely destructive lesion in the anterior cortex of the lower end of the femur, a most favorite site for osteogenic sarcoma. So we thought we were dealing with a very early osteogenic sarcoma of the lower end of the femur.

These patients' films were taken to New York. Dr. Herendun and the two Coleys, the elder and the younger, all saw the films and they all agreed that we were dealing with an early osteogenic sarcoma. The patient was brought back and Coley's fluid together with x-ray treatment was given. There was some controversy between the pathologists about the findings in the scalp nodules and the findings in the femur. Dr. Gay contended that the cell elements found in the femur were the same as those in the scalp. So then we began to work backwards. The probabilities were

that this was an endothelioma originating in the femur and those in the scalp were secondary. The proof of the pudding is always in the eating and here again we have the third test, and that is that this patient was given intensive treatment, with marked improvement and clearing up of the destroyed bone.

The final film over here, which was taken in August of this year, shows a complete healing of the bone pathology in the lower end of the femur. About a week or ten days ago the boy began to have pain in the knee again, and in comparing the latest film with this one we feel that there is beginning involvement again. In other words, a recurrence, so the boy is getting more therapy.

(Slide) The sixth and last case I want to show is a case about which I know nothing and I haven't found anybody else who knows very much about it. For want of a better classification we have classified it under xanthomatosis. Xanthomatoses are supposed to be due to a disturbance in the fat metabolism with a deposition of lipid substances in various parts of the body, especially the bones. There are three recognized types. One is the so-called Pick's disease; the second is the so-called Gaucher's disease; and the third is the so-called Christian-Schiller's syndrome. After going through those three, we felt this boy fitted in more particularly to the category of Christian-Schiller's syndrome. This boy at a very early age in life, according to his mother, had tumefactions around the left elbow. Dr. Flinn examined this boy first and said that the palpable mass felt more like a bunch of worms under the skin and we thought it might be multiple hemangiomata, and we are not sure that we are not dealing with two lesions in this boy. But that doesn't account for the lesions in the chest, on the left side. There are two ribs involved with a cystic-like degeneration of the ribs, with expansion of the cortex, and on the right side the same type of tumor involving two ribs. Then, coming to the femur, you notice a defect in three places.

When Christian published his so-called Christian-Schiller syndrome, he thought he had a triad of symptoms which always spelled his particular form of xanthomatosis; that is, diabetes insipidus, exophthalmus, and

bone lesions of this particular character. They found out on further investigation, however, that the cases Christian reported all had either involvement of the pituitary, which would give diabetes insipidus, or involvement of the orbit which would give your exophthalmus. So, while we have this general syndrome known as Christian-Schiller's syndrome, it doesn't always mean any particular type. In other words, the symptoms that the patient gets in this particular disease are due more to the location of these fatty deposits than anything else, and in Christian's disease it was found more in the pituitary and the orbit.

This child should have his blood chemistry done. He should have an increase in cholesterol if this is Christian-Schiller's syndrome. The family has not been at all cooperative, so we haven't been able to get a biopsy. After we get some of those things done and a biopsy we may have to change that diagnosis.

By the way, another thing in favor of Christian-Schiller's syndrome is that the skull is always involved, and we find the skull is involved here. But after we get a biopsy we may have to change that diagnosis, and it may turn out to be something else. But for the present time we carry this picture as a probable case of Christian-Schiller's syndrome.

909 Washington Street.

DISCUSSION

PRESIDENT NILES: You have heard this most instructive paper. I would like to hear some discussion of it.

DR. G. C. McELFATRICK (Wilmington): Dr. Allen has shown some very interesting cases, especially the first case, the endothelial myeloma. This case brought out that the therapeutic test was to apply therapy treatment. That is very good, but there is still a step before we should do the therapy—I think he will bear me out in this—and that is that suspected cases of endothelial myeloma should never be treated until a Wassermann is taken. I think that is an important point, and I think possibly it would apply to any bone disease, even in the fourth case he presented, with carcinoma of the lower end of the femur, which also had deep therapy. I feel that that case should have a Wasserman. I think that

is an important point. I think in all of bone conditions where we are not sure, before we apply the therapeutic test of deep therapy, we should take a Wassermann. I think it will help us to rule out other possible conditions.

Dr. Allen, of course, has presented here a lovely set of bone conditions and, as he admits himself, if he had not had the cooperation of the men with him he would have had a lot of difficulty in making a diagnosis. I think too much is laid on the x-ray man to make a positive diagnosis inside of three minutes. I think we should cooperate more with the x-ray man; we will get better results and better diagnoses. In a good many of these cases, I think it is almost impossible, even with all your history, to turn around and make a diagnosis without repeated examinations, possibly every month for four or five or six months. Dr. Willard had a case of a child who had had pain in the hip. The x-ray was negative month after month starting in January, and it was only in May that we discovered the youngster had a tubercular lesion.

PRESIDENT NILES: Is there further discussion?

DR. IRA BURNS (Wilmington): The bone cases which Dr. Allen has shown certainly show definitely how difficult and intricate those things are. Even with all the study that has been done it is a most difficult thing even with the leading men.

With regard to the Wassermann, Dr. Flinn indicated that a Wassermann was taken, but not only the Wassermann but every other means of eliminating syphilis should be taken. The Wassermann alone is by no means evidence that you are free from syphilis, and some antisiphilitic treatments sometimes can be very well done.

Dr. Allen mentioned that the knee in the second case, I believe, the sclerosing type apparently, that had been cured after treatment. Of course, he doesn't mean to say "cured" in the ordinary sense at all, he probably meant to say it was arrested, because malignancies, as everybody knows, are practically never cured. I think we all realize that they have to be gone at more and more vigorously and persistently and consistently than we have ever done, because our records

show that malignancies, carcinoma particularly, have recurred after breast amputation, I think, after a matter of twenty-eight years. I am sure he didn't mean to indicate that the patient seemed to be cured, but at any rate I think in dealing with malignancies certainly the word "cured" is the last word to be used.

PRESIDENT NILES: Is there any other discussion of this paper?

DR. I. L. FLINN (Wilmington): I want to fill out a little bit on one of Dr. Allen's cases that he didn't happen to know about. I saw the case of Christian-Schiller's disease yesterday. Originally when he came in he was complaining of pain in the chest, and it was over one of those lesions in the ribs. As Dr. Allen said, the family was very uncooperative at that time. Since then that whole condition has cleared up. He has no more pain there, and I think probably in the course of a few more months we will be able to get him in and study him.

In regard to the first case which turned out to be Gare's osteomyelitis, we went through the literature in an attempt to find something about it, and outside of Gare's first article, which is incomplete because there was no pathological work done on it, there is practically nothing except the report of cases. So that, in this particular condition it is very difficult to find out just exactly what Gare's osteomyelitis looks like from the histological picture. That is our guess because the condition cleared up completely; after what amounted to a decomposition of the osteomyelitis the wound healed in short order, so that we are literally forced to call it Gare's type rather than any of the other bone conditions.

PRESIDENT NILES: Is there any other discussion of this paper? If not, Dr. Allen, will you close?

DR. ALLEN: I have nothing further to say except that I appreciate the discussion very much by Dr. McElpatrick, Dr. Burns, and Dr. Flinn.

With regard to the Wassermann, it was done in all those cases but I failed to mention it in my hurry to get through.

With regard to Dr. Burns' point, if I said "cured," what I really meant to say was that

the bone at that point was apparently cured from the standpoint of x-ray evidence, and we know, particularly in endothelial myeloma, that it is liable to occur in bones other than the original site. But in the last case that I showed, the boy is having a recurrence in the original site.

WOMAN'S AUXILIARY: A. M. A.

A. M. A. HEADQUARTERS—OLD AND NEW

In 1845 Dr. Nathan Smith Davis, a graduate of 1837 of the College of Physicians and Surgeons of the Western District of New York and a practitioner in Binghamton, presented a resolution to the New York State Medical Society that a National Medical Convention be established. This resolution was adopted and accordingly on May 5th, 1846, 119 delegates from 14 States (Vermont, New Hampshire, Massachusetts, Connecticut, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, Georgia, Mississippi, Illinois, Indiana and Tennessee) met at the University of the City of New York and formulated definite plans for a National Medical Convention. One year later to the very day—May 5th, 1847—the delegates convened in Philadelphia in the Hall of the Academy of Natural Sciences and two days later—May 7th, 1847—resolved themselves into the American Medical Association with Dr. Nathaniel Chapman of Pennsylvania as first president.

Until 1883 headquarters were "under the permanent secretary's hat." The annual four-day session and the publication of its transactions constituted the major part of the Association's activities directed largely by Dr. William B. Atkinson, who had been elected permanent secretary in Baltimore in 1866. Dr. Atkinson served until 1899.

In 1883 the Association decided to publish a Journal very largely at the suggestion of Dr. N. S. Davis, now civic and medical leader in Chicago. From his own private office on July 14th, 1883, appeared the first Journal of the American Medical Association. Dr. Davis was the first editor.

As the work of the Association grew, the headquarters were moved successively to 68 Wabash avenue (Nov. 24, 1888), to 86 Fifth

avenue (Sept. 1, 1894) and to 61 Market street (May 1, 1896).

In 1902 with a circulation of 25,000, with the Market street lease terminating and additional space impossible to secure at this location, the Board of Trustees recommended and were authorized to purchase ground for a permanent home. On March 2nd, 1902, the five brick houses standing on the 100x80 feet at the northeast corner of Dearborn street and Indiana avenue (now Grand avenue) were acquired for \$42,646.96.

By January, 1903, there had been constructed, equipped and occupied a three-story and basement stone-trimmed brick building 80x40 feet facing Dearborn avenue on the north corner of the property at a cost of \$41,322.90.

The adjoining property to the east with 40 foot frontage on Indiana avenue, extending 100 feet to the alley on the north (occupied by two three-story basement houses facing on Grand avenue) was purchased for \$15,000.00 May 26th, 1903.

In 1905 a four-story addition was built directly to the east (behind) the original building. To the latter an additional story was added. Four stories and a high basement now occupied the north 2 5 (40x120 feet) of the Association's property.

By 1909 the circulation of the Journal had been increased to 54,000. The collateral printing and publishing business, the work of the Directory Department, the Councils on Medical Education and Hospitals and Pharmacy and Chemistry with its Chemical Laboratory had completely outgrown the present quarters, as well as one of the two houses (three story basement) to the east. More room was imperative.

Plans were submitted to the House of Delegates in Atlantic City in 1909 by the Board of Trustees for the erection of a six-story building of fireproof construction capable of carrying additional floors as the need might arise. Actual work began March, 1910 and the building was completed without interruption of work in any department.

By 1922 the need for more room again became imperative. The Board of Trustees, with the approval of the House of Delegates,

razed the original three story structure with its added (1905) extra floor and completed the present 100x160 building, six story fire-proof construction in 1924. In 1930 to this was added a temporary structure for storage purposes.

In 1935 at the meeting of the Association in Atlantic City, the Board of Trustees discussed the need for more space to house the increasing activities of the headquarter's office. At the September meeting of the Board enlargement of the present building was considered, as well as the purchase of a new location. It was finally decided that an addition of two stories with a roof assembly hall would accommodate the needs of the Association for the next ten to fifteen years. Architects' plans were authorized and presented to the Board by Holabird and Root at its November meeting. These plans were approved and work was started under the immediate supervision of the Executive Committee and the secretary-general manager. Contracts were let and actual work was commenced November, 1935.

The completed structure will cost approximately \$400,000.00 and will be occupied early in the summer of 1936.

AUSTIN A. HAYDEN, M. D.
Secretary, Board of Trustees

The fourteenth annual meeting of the Woman's Auxiliary to the American Medical Association will be held in Kansas City, Missouri, May 11-15. The Auxiliary headquarters will be at the Baltimore Hotel. Mrs. H. L. Mantz, president of the Woman's Auxiliary to the Jackson County Medical Society, is general chairman of convention arrangements. A letter from Mrs. Mantz to the members of the Missouri Auxiliary was published in the March number of the Journal of the Missouri Medical Association. We quote the following passages from her letter:

"If anything further were needed to warm our hearts to the responsibilities attached to the entertainment of the Woman's Auxiliary to the American Medical Association, we found it in the charm and graciousness of our National President, Mrs. Rogers N. Herbert,

(Continued on Page 68)

EDITORIAL

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THE NEW SURGEON-GENERAL

The successor to Dr. Hugh S. Cumming as Surgeon-General of the United States Public Health Service was sworn into office on April 6, 1936. The individual so sworn was Dr. Thomas Parran, Jr., for the past six years Commissioner of Health of the State of New York, and an M. D. of Georgetown University, 1915. According to the records available to us, Dr. Parran has never engaged in private practice, his entire career, following a two-year internship at Sibley Hospital, Washington, having been spent in public health work. This work has taken him into Alabama, Missouri, Illinois, Kansas and Oklahoma, where he left behind him a record as an able and aggressive sanitarian, a record which attracted to him the attention of the Roosevelt regime when Roosevelt was merely the Governor of the Empire State, and a record there that won a national appointment when the

Governor of that one state was elected the President of all the states.

Time, for April 6, 1936, tells the whole world that the new Surgeon-General "wants socialized medicine, with free drugs and hospital service for every inhabitant of the U. S. who cannot afford them. . . . By the nature of Dr. Parran's plans, thousands of the 167,000 doctors in this country would be obliged to take jobs with city, state or Federal medical agencies. They would thus abandon the legalized privileges of the professional man, the right to deal only with such clients as please them, the right to do whatever they think best for their clients." Without attempting to read between the above lines the obvious implications so well known to the man of medicine, one paramount question emerges: who will win the ultimate victory, the 43-year-old Parran or the 2300-year-old profession?

Men of the Parran type, who have never earned a single dollar in private, competitive practice are the very ones who would be expected to advocate socialized medicine, with its monthly check on the exact date, its smug sense of security from budgetary problems, its placid compliance with political string-pullers, its stultifying self-abnegation and its scientific suicide. If Dr. Parran has any delusions as to his ability to use his new Federal office for the advancement of medical socialism let him ponder deep and long over these simple facts! (1) this country is normally overwhelmingly Republican; (2) the present Democratic administration represents merely an evanescent episode (the like of which we privately hope will never be repeated); (3) socialism has no place in the American scheme of things and probably never will have; (4) the people of this country do their own thinking, without the aid of the congenital bureaucrats; (5) the profession in this country is both intelligent and organized; and finally, (6) both people and profession have already had their fill of a "planned economy," a "life more abundant," and a tax more onerous.

Our private opinion is that Dr. Parran will make, as heretofore, an able sanitarian and

an accurate statistician, but as a medical socialist, as a maker of professional policies, and as a mold of public medical opinion he will prove as ineffective as old King Kanute and his broom against the sea. And we also predict that having reached, at 43, the most publicized salaried medical job in these good old states he will be content there to remain till the retirement age, something like a quarter of a century, even though three-fourths of that time will (according to past experience) be spent under Republican administrations.

Nevertheless, it behooves the entire profession to keep its eyes on Dr. Parran and his Public Health Service, to the end that neither of them has a chance to foist socialized medicine on an unwanting profession or an unwitting public.

For the past five years Dr. Parran has been treasurer of the American Public Health Association, and this year is the president-elect, assuming office next October. Under date of April 2, 1936 we are in receipt of their news release which states that "the oldest and most powerful association of public health workers in the United States, the American Public Health Association, will convene"
Modest little outfit, eh?

The credit for the authorship of the little poem entitled "The Doctor," which was published in THE JOURNAL last month (page 53) belongs to Mr. Jules H. Rothschild, of Wilmington. We regret that last month's publication merely listed the poem as "contributed."

CALL FOR PAPERS

The program for the next annual session of the Medical Society of Delaware is now being arranged. The secretary, Dr. William H. Speer, announces that any member of the Society who wishes to present a paper must submit his name and address and the title of the paper, to the secretary on or before May 15, 1936.

Dr. M. A. Tarumianz has been honored with the appointment as chairman of the Committee on Outpatient Clinics and Social Service Work of the American Psychiatric Association. Dr. Tarumianz will attend their annual convention at St. Louis May 4-9.

WOMAN'S AUXILIARY: A. M. A.

(Continued from Page 66)

Nashville, Tennessee, who went to Kansas City in November for the first convention conference. We were gratified when she approved wholeheartedly all the accommodations and facilities for making this the best convention so far.

"Yes, we are just that ambitious, for in addition to housing the American Medical Association sessions and its great exhibits in our new \$5,000,000 municipal auditorium, we are hoping that a spirit of friendliness will pervade each and every gathering, business or social. We want this to be remembered as the 'friendly convention'.... Our entertainment plans are being made to include every woman attending the convention, regardless of Auxiliary affiliation."

Further announcements of the Annual Convention will be given in the May issue of the News Letter.

A bridge party followed by tea was given by the Delaware Auxiliary March 25, for the benefit of the Hygeia Committee. The party was held at the Washington Heights Century Club and was well attended. Mrs. Willard Smith presented a painting, done by her brother, which was given as a door prize. It is planned to place subscriptions to Hygeia in various institutions not now receiving this magazine. Mrs. Thomas Baker was chairman of the benefit affair, assisted by Mrs. L. J. Jones, Mrs. J. H. Mullin, Mrs. N. W. Voss, Mrs. M. B. Holzman, Mrs. C. L. Munson, Mrs. C. L. Hudiburg, Mrs. G. B. Beatty, Mrs. R. A. Lynch and Mrs. Roger Murray.

A sewing meeting was held at the home of Mrs. Gerald Beatty on March 17. The next meeting will be at the home of Mrs. Lawrence Jones, 1010 Delaware avenue, on Tuesday evening, April 21.

Members of the Auxiliary have been urged to attend the Health Institute in Philadelphia the second Tuesday in April.

The next meeting of the State Society will be held May 19, probably in Smyrna.

DELAWARE ACADEMY OF MEDICINE

Effective April 1, 1936, the following are the officers and committees for the ensuing year:

President, Lewis B. Flinn, M. D.; *First Vice-President*, Charles E. Wagner, M. D.; *Second Vice-President*, E. Harvey Lenderman, M. D.; *Secretary*, John H. Mullin, M. D.; *Treasurer*, William H. Kraemer, M. D.

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Admission Committee—George W. Vaughan, M. D., chairman (1 yr.); Henry V. P. Wilson, M. D. (2 yrs.); Julian Adair, M. D. (3 yrs.); Jerome D. Niles, M. D. (4 yrs.); Douglas T. Davidson, M. D. (5 yrs.).

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House Committee (appointed)—Bartholomew M. Allen, M. D., chairman; Lawrence J. Jones, M. D., George C. McElfatriek, M. D., J. Draper Brown, D. D. S.

MISCELLANEOUS**Philadelphia's Post Graduate Institute**

Provision has been made for an expected attendance of at least 1,000 at the Philadelphia County Medical Society's Post Graduate Institute, to be held in the Bellevue-Stratford Hotel, Philadelphia, April 20 to 24, inclusive.

Response to the preliminary announcements

has exceeded the committee's fondest hopes, reports its chairman, Dr. Rufus S. Reeves. Letters of inquiry have been received from physicians in 25 states, as far west as Missouri, as far south as Alabama, and as far north and east as the New England states.

In view of the widespread interest in this initial effort by the county society of an outstanding medical center to provide advanced instruction for practicing physicians, it is virtually certain that the Institute will become an annual event.

This year's program, dealing entirely with cardiovascular and renal diseases and their far flung ramifications, is being presented by 53 leading members of the faculties of the University of Pennsylvania School of Medicine and Graduate School of Medicine, Jefferson Medical College, Temple University School of Medicine, and the Woman's Medical College of Pennsylvania.

Registration, open to all physicians who are members of their local county medical societies, will begin at 10 a. m., Monday, April 20. The only charge is \$5.00, to help defray the expenses of the Institute. Following a luncheon in the hotel, the scientific program will get under way at 2 p. m. Morning and afternoon sessions will be held on Tuesday, Wednesday, Thursday and Friday. Since there is no division of the program into sections, only one paper will be read at a time, and all attending will be able to listen to the entire program.

In addition to the program there will be an interesting arrangement of technical exhibits in adjoining rooms, covering a wide range of articles used by the physicians or their patients. Cooperation of the exhibitors to make the Institute a success is heartily appreciated by the committee, Dr. Reeves states.

Committee for the Study of Suicide

An organization to be known as the *Committee for the Study of Suicide, Inc.*, was incorporated last December under the laws of the State of New York and began its activities early in January. The committee may in time increase its present membership of ten to a total number of twenty. The Board of Directors and the officers of the new corporation are: Dr. Gerald R. Jameison, President; Mr.

Marshall Field, Vice-President; Dr. Henry Alsop Riley, Treasurer; Dr. Gregory Zillboorg, Secretary and Director of Research; Miss Elisabeth G. Brockett, Dr. Franklin G. Ebaugh, Dr. Herman Nunberg, Dr. Dudley D. Shoenfeld, Dr. Bettina Warburg.

The committee plans to undertake a comprehensive study of suicide as a social and psychological phenomenon. To achieve this the following general outline was adopted.

1. *Intramural studies* of individuals inclined to suicide in selected hospitals for mental diseases. These will embrace constitutional, neurological, psychiatric and psychoanalytic investigations of the phenomenon with special reference to therapy and prevention. This part of the study will include the investigation of suicidal trends or ideas of death emerging in organic deliria.

2. *Extramural studies* of ambulatory cases afflicted with suicidal trends or with obsessional wishes for their own death. These studies will be primarily therapeutic in nature, the cases to be treated in especially selected out patient clinics and by qualified psychiatrists and psychoanalysts. Regular "control seminars" to follow and to supervise the course of the cases under treatment will be held under the guidance of the committee. The medical and neurological status of all cases will be a prerequisite of each case record.

3. *Social studies* of suicide will be undertaken along the following general lines. Various attempts at suicide will be followed up by experienced psychiatric social workers; all cases will be studied from the standpoint of social background and history and those who failed in their attempts or have recovered from injuries following a partially successful attempt (prolonged unconsciousness or physical illness) will be urged to submit to psychiatric and psychoanalytic treatment in the hands of the intra- or extra mural therapeutic agencies which will be available to the committee.

4. *Ethnological studies*, i. e. comprehensive investigation of suicide among primitive races, will be one of the first concerns of the committee, for suicide is a rather frequent occurrence among many primitive races still extant and when studied may throw some

light on suicide as a psycho-biological phenomenon. It is planned that an expedition headed by a psychiatrically schooled anthropologist, a psychiatrist and a psychoanalyst should work for a time in a region such as the Melanesian Islands or the Gulf of Papua, and in the interior of the Mexican Northwest as well as among some of the North American Indian tribes. Further details of this plan will be elaborated.

5. *Historical studies* of suicide will be pursued systematically under the auspices of the committee, so as to make available a scientific history of the phenomenon as a social and medico-psychological problem.

The committee was organized under the guidance of its first chairman, the late Dr. Mortimer Williams Raynor, Medical Director of Bloomingdale Hospital, who died on October 5th, 1935.

Dr. Henry E. Sigerist, Professor of the History of Medicine at Johns Hopkins University, and Dr. Edward Sapir, Professor of Anthropology at Yale University, are consultant members of the committee. They will advise and guide in that part of the work which touches their respective fields.

The executive offices of the committee are located at Room 1404, the Medical Arts Center, 57 West 57th Street, New York City, and will be in charge of an executive assistant.

Visiting Nurse Association

A recent meeting of the Medical Advisory Board was held in conjunction with the Nurses Committee to discuss the propriety of the Visiting Nurse giving, as ordered by the physician, various medications hypodermically.

In November, 1930, a ruling was made by the Medical Board against serums and vaccines. But recently so many new lines of treatment have been developed, which physicians have requested the Visiting Nurse to give that a new ruling was needed for the organization to meet these demands.

Accordingly, on February 24, 1936, the Medical Advisory Board made this ruling: That the nurse may give the following remedies subcutaneously when ordered by the physician, and as an emergency measure only: atrophine, codeine, nitroglycerine, caffeine so-

dium benzoate, other alkaloids commonly used hypodermically. The nurse shall not give any other drug used for the purpose of treating patients, except insulin may be given when it is impossible or impracticable to train some member of the family to give the treatment, or where it is intended to be given for a short time to stabilize the patient. Exception is also to be made of corpus luteum or other ovarian extracts used in pregnancy.

Transfusion of Cadaver Blood

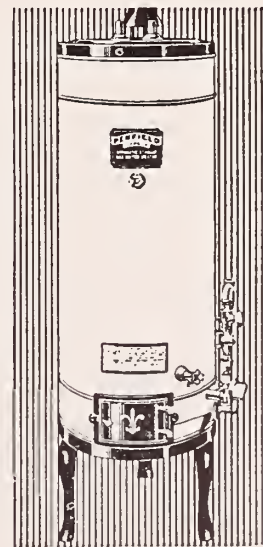
S. S. Yudin, Moscow, U. S. S. R. (*Journal A. M. A.*, March 21, 1936), states that transfusion of cadaver blood was demonstrated in animal experiments and proved its therapeutic value in a considerable clinical material. Cadaver blood obtained from six to eight hours after death remains sterile and preserves its living properties. The recipient of cadaver blood is afforded ample safeguards by serologic tests of the blood, a bacteriologic checkup as to its sterility, and a careful necropsy. Because of fibrinolysis, blood of individuals dying suddenly remains fluid and

can be preserved for more than three weeks. The therapeutic effect of cadaver blood does not differ from that of the blood from living donors. The technic of obtaining blood from a cadaver is simple and does not require any special apparatus. The jugular vein is severed and a glass cannula to which a rubber tube is attached is introduced into each end of the vein. The cadaver is then placed in the Trendelenburg position and the blood is allowed to run into a 500 cc. glass flask. The neck of the bottle is stoppered with cotton and the bottle is placed in a refrigerator. Organization of stations for collection of fresh cadaver blood should offer no difficulties in the larger cities, particularly in the large hospitals for emergency cases. The supply could come from traffic accidents as well as from the medical service where deaths from coronary thrombosis and angina pectoris are not rare. The author's experience with cadaver blood transfusions embraces 924 transfusions. Besides, his clinic sent out more than 100 flasks of cadaver blood to various hospitals and clinics.

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Meets the First Thursday

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Moreover, when the condition is superimposed by chance infection, the delicate balance may be seriously upset, since the infant's reserves have already been drawn upon, so that resistance to infection and dangerous forms of diarrhea may be too low for safety. Every physician dreads diarrhea, which Holt and McIntosh call "the commonest ailment of infants in the summer months."

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CANNED FOODS AND THE PUBLIC HEALTH

IV. BOTULISM

• Several of our readers have inquired as to the possibility of botulism resulting from the consumption of commercially canned foods. The canning industry is proud of the part it has played in the eradication from its products of this deadly type of food intoxication. We are glad to devote this space to a discussion of this important topic.

During recent years, the daily press periodically carries reports relating how one or more members of a family, or of a group of persons, were stricken after a meal, usually with fatal results. Sometimes these accounts describe how an "anti-toxin" was rushed to the scene—an indication that botulism was involved. These press reports often include the statement that a "canned food" was incriminated as the cause of the illness.

We wish to emphasize that as far as the records go, these outbreaks without exception are not attributed to foods commercially canned in this country. In practically every instance, it was found that the foods—usually of a non-acid or semi-acid nature—had been preserved at home by the use of inadequate heat sterilization processes (1). These press reports, by not stating correctly the type of food involved, have done much to cast unwarranted suspicion on commercially canned foods as possible causes of botulism.

Botulism, or acute toxemia due to clostridium botulinum, is by no means a new affliction. As early as 1802—ninety-five years before van Ermengem discovered the true cause of the intoxication—warnings were issued against botulism. However, not until severe outbreaks occurred in this country some fifteen years ago, was it realized that cognizance should be taken of the fact that

foods canned by the methods used in those days could become contaminated with the toxin of this organism. This fact having been realized, the canning industry took immediate steps to prevent such contamination of their products.

Research was inaugurated and has been continued to which the industry has contributed not only financially, but also by the studies of scientists associated directly with the canning industry (2). The end result of these researches was the development of scientific methods of determination of heat sterilization treatments, or heat processes as they are known to the industry, which would be adequate to insure the safety of canned foods from the standpoint of botulism (3).

The effectiveness of the measures generally adopted by the canning industry of the United States is evidenced by the fact that no case of botulism attributable to an American commercially canned food has occurred during the past ten years (1a). Foods packed in commercial canneries are heat processed not only to insure protection from bacterial spoilage causing merely the loss of the food, but to render them safe from the standpoint of botulism, as well. In fact, a sterilizing process sufficient to insure the destruction of the most heat resistant strain of *Cl. botulinum* ever isolated is considered the minimum requirement of heat treatment of commercially canned foods. The National Canners Association has issued lists of scientifically determined processes for non-acid canned foods with which canners comply (4).

Such are the facts. The American canning industry offers its products to the consuming public for what they are; namely, wholesome and nutritious foods.

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1. a) 1935 Amer. J. Public Health, 25, 301
b) 1935 J. Amer. Diet. Assn. 11, 18

2. 1936 J. Bacteriology 31, No. 1 P. 71
1923 Amer. J. Public Health, 13, 108
1922 J. Inf. Dis. 31, 630

3. 1929 Natl. Res. Council Bulletin, 7,
No. 37

4. 1931 N. C. A. Bulletin 26-L,
Revised

This is the twelfth in a series of monthly articles, which will summarize, for your convenience, the conclusions about canned foods which authorities in nutritional research have reached. We want to make this series valuable to you, and so we ask your help. Will you tell us on a post card addressed to the American Can Company, New York, N. Y., what phases of canned foods knowledge are of greatest interest to you? Your suggestions will determine the subject matter of future articles.



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★ Laryngoscope 1935 XLV, 149-154
Proc. Soc. Exp. Biol. and Med., 1934, 32, 241-245
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*Martenstein, H.: Syphilis Treatment: Enquiry in Five Countries, *League of Nations Quart. Bull. Health Organ.*, 4: 129, 1935.

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Karo	2 tablespoons

Lactic Acid Milk	12 ounces
Boiled Water	8 ounces
Karo	2 tablespoons

REFERENCES:

Kugelmass, Clinical Nutrition in Infancy and Childhood, Lippincott.
Marriott, Infant Nutrition, Mosby.
McLean & Fales, Scientific Feeding in Infancy, Lea & Febiger.

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POST-OPERATIVE COMPLICATIONS, WITH SPECIAL REFERENCE TO WATER AND CHEMICAL BALANCE*

DAMON B. PFEIFFER, M. D.**

Philadelphia, Pa.

The great French physiologist Claude Bernard once remarked that maintenance of fixed conditions within the body is the prime requisite for continuation of the processes of life. Crile has vividly stated that life is held in suspension in water. So true is this that no vital processes with which we are acquainted can go on without a minimum of water. It follows that there is an optimum demand for water on the part of every vital activity. Furthermore, a certain composition and concentration of the chemical elements of vital processes must be present if fixed interior conditions necessary to life are to be maintained. It is not to be wondered at, therefore, that in the evolution of all living things nature has provided automatic safeguards. Our thirst, appetites, habits and functions have been phylogenetically schooled in such a manner that under ordinary conditions of health and living this fixity is kept without our planning for it. Indeed too much planning, as in the case of the health and diet faddist, is only too likely to upset the balance. It is in the extraordinary conditions of privation, hardship or in disease that it becomes necessary to inquire into the fundamentals of the matter, to recognize deviations of importance and intelligently to apply our knowledge.

It is very easy to overlook or underestimate the simple and the obvious, and it is astonishing how long it has taken to appreciate the importance of water metabolism and to ac-

quire exact data upon the subject. Even now our knowledge is scanty, but there is no longer excuse for failing to recognize or, better, to prevent dehydration. There are two normal sources of water for bodily use: first the exogenous, or the water which is taken in by mouth in the form of food and drink. The ordinary diet contains approximately 80% of water. The usual house diet may thus yield as much as a litre of water and the restricted diets proportionately less. Naturally, in the postoperative period the intake in this form frequently shrinks to little or nothing. Similarly water as such or in other fluid mixtures during this period is usually scanty, or if given by mouth may fail of absorption in the stomach or indeed may initiate hypersecretion into the stomach, thus serving to deplete rather than to replace blood and tissue requirements.

The second general source of water is the endogenous. This comprises the preformed water in tissues which may be released by oxidation of body cells and thus liberated for general use. In fever and starvation this may be as much as two to three hundred cubic centimeters daily, but is usually less and is of little clinical importance. The second portion of endogenous water is derived from the oxidation of food products. Proteins, fats, and carbohydrates when broken down yield varying amounts of water but the total, even on a liberal diet, rarely exceeds four hundred cubic centimeters, and as intake falls or digestive activities are damaged it falls proportionately. A considerable amount of the water in the body is present in the form of a revolving fund and is absorbed and used over and over again. The secretions of the salivary glands, stomach, liver and pancreas may total two or more litres a day but they are carried down in the intestinal tract and the water is

*Read before the Medical Society of Delaware, Wilmington, October 8, 1935.

**Associate Professor of Surgery, Graduate School of Medicine, University of Pennsylvania.

largely abstracted before ejection of the solids.

To estimate our needs for the purpose of maintaining a balance it is essential to know the avenues and the amount of losses and the proper allowance for loss that is essential to function. We are apt to think of urine as the chief avenue of loss of water. It may probably be regarded as the most important fluid loss because of its action in carrying off waste products and serving automatically as a chemical regulator, but it is often not the greatest loss. This occurs normally through the lungs and skin. The insensible perspiration and evaporation from the lungs amount to 1000 to 1500 c. c. under average conditions, and in hyperpnoea and when perspiration is profuse the loss may be greatly increased. I shall show you a case in which profuse perspiration nearly resulted fatally.

The urine must be considered not only from the standpoint of mere loss of water to the body but as an organ also to be supplied with water in order to perform its necessary functions. The normal excretion of solids daily in the urine averages from thirty-five to forty grams. Fifteen grams of water are required to carry off each gram of solids. Assuming therefore a normal concentrating ability of the kidney, at least 600 c. c. of urine must be passed daily in order to clear the body of its waste products. This is approximately 20 ounces which the old rule of thumb prescribed as the minimum satisfactory amount of urine excretion after operation. But in fevers and toxic processes the amount of waste may be greatly increased and also the concentrating capacity of the kidney may be more or less diminished by the acute process itself or by the previous existence of chronic degenerative disease. It is necessary, therefore, to estimate carefully the individual requirements, bearing in mind the probable wastes requiring elimination and the actual performance of the patient as evidenced by the amount and specific gravity of the output. While in quiet states the minimum of 500 or 600 c. c. may be tolerated, in acute conditions one should aim at a much larger output. Probably one should not be satisfied with less than 1500 c. c. daily, with a specific gravity of not more than 1015. If time permits, a previous esti-

mation of the concentrating power of the kidney is of prognostic importance and helpful in postoperative treatment. The Rosenthal test and the urea concentration test are available in this connection.

The water lost in feces normally is small, amounting to not more than 250 c. c., but in enteritis and diarrhea it may be large. Also in the postoperative period, particularly after abdominal operations even when there is no discharge from the bowels, there is frequently paralytic ileus with a large accumulation of fluid in the stomach and intestines, containing water that is to all intents and purposes lost to the body at the time. While not strictly germane to the subject under discussion, it may also be proper to remark that the distribution of the blood and the accumulation of tissue fluids outside of the vessels in traumatized areas not only play an important role in shock, as shown by Blalock and others, but have an important effect upon water metabolism in other important areas of the body and require compensation. Finally, in our calculations must appear losses by vomiting, from fistulas, and from various kinds of drainage, as for instance from tubes in the common ducts, which discharge bile that is almost entirely water. Remember further that most patients are deprived of water in preparation for anesthesia so that there may already be a deficiency.

Considered alongside the various necessary and incidental losses of water, the possible amount of endogenous water available to the body is trivial and the automatic adjustment of the body to privation is extremely limited. It therefore becomes our task to know intakes and outputs in their various forms and to provide against depletion. This requires an accurate tally of supply and obvious losses. With this as a basis, the clinician must estimate the probable variations in loss in the individual patient.

Practically, therefore, the computation of water requirement of the postoperative patient for the first 24 hours is as follows:

- (1) The insensible loss.. 1500 c. c.
- (2) Urine 1500 c. c.

Total minimum 3000 c. c.

- (3) Plus losses from gastrointestinal tract, bleeding, drainage and excessive perspiration.

The total requirement in the first 24 hours is rarely less than 3500 c. c. and may reach as high as 6000 or 7000 c. c. The amount necessary for subsequent days is similarly calculated, the total diminishing as a rule with improvement in the general condition.

The ways of administering these large amounts of fluid are now quite well understood and require only passing mention. Every surgeon of experience knows that in many, and particularly abdominal, cases the normal route by mouth is not only ineffective but dangerous in the early postoperative period. It was Murphy who clearly pointed out thirty years ago that water is absorbed chiefly in the colon and therefore it is irrational to pour water in at the mouth when conditions of intestinal paresis prevent its passage through 20 or 25 feet of intestines to the point of absorption. Add to this the ill effects of distention, stagnation, irritation and hypersecretion and we have the scene set for so-called acute dilatation of the stomach, which may in itself be fatal. It was Murphy who showed that water could be introduced into the colon by proctoeclysis and absorbed in sufficient amounts to prevent dehydration under ordinary circumstances. Under his influence the use of constant proctoeclysis or enteroeclysis was brought to a high art. To a certain extent it is now a lost art. Its difficulties consist in the provision of sufficient fluid to keep absorption active without overdilating the bowel, which defeats its own purpose. This is accomplished best by regulating the height of the column of fluid at a level which is just sufficient to overcome intra-abdominal tension. Many of the older nurses were adepts, but the difficulties led to modifications such as the drop method or the intermittent plan of instillations. For many cases it is ample and ideal, but where accuracy is especially desirable it has been supplanted by subcutaneous or intravenous infusion, by which means a known amount of fluid is unerringly supplied to the patient. Furthermore, as we shall see, it is often desirable to supply chemical substances which cannot be absorbed by

rectum but can be given in known quantities beneath the skin or into the veins.

The most important single consideration in the immediate postoperative period is water, and it is the one thing which our internes, unsupervised, are most likely to forget. I am accustomed to say to them "keep the stomach empty and the circulation full." A thorough understanding of quantitative fluid needs and how to supply them is of the first importance. It is of course possible to give too much fluid and to give it too rapidly, so that a weak or embarrassed circulation may be adversely affected. Unfortunately, there is as yet, so far as I know, no definite indicator of the optimum fluid content. The occurrence of oedema, of excessive bronchial secretion, of polyuria are signs and one should not too greatly exceed the actual computed requirements in any case. It still remains true, however, that the great defect and the great danger at the present time are in undersupply rather than in oversupply of fluid.

A more recent development which is less known has to do with qualitative needs or the restoration of chemical balance disturbed by abnormal metabolism or by the loss of certain metabolites. This first appeared in surgical practice as a result of the concept of acidosis. Fevers, the excessive breakdown of tissues, infections in children, metabolic disturbances such as diabetes, renal insufficiency, prolonged general anesthesia all were shown to bring about increased hydrogen ion content of body fluids, and often acetone in the urine was used as an indicator, incorrectly as we know now. To combat the acid condition, an alkali such as sodium bicarbonate was added to the colonic infusion or at times given intravenously. The results were not altogether happy. Often cases did badly on this treatment and some even went into tetany. It was then recognized that chemical balance could be disturbed in the other direction, that alkalosis in fact was more important to the surgeon than acidosis, and the giving of alkaline substances therefore was not only unnecessary in many instances but positively dangerous. Time does not permit us to trace the development of our present knowledge but, briefly, it has become evident that the chemistry of the body may be unbalanced by either the loss

of basic or acid substances in excess as well as by the formation of abnormal acids in the body. Also the selective excretory capacity of the kidneys must be taken into account as influencing the accumulation of undesirable chemical products which must be neutralized or their excretion hastened by appropriate measures.

The most common and important base of the body from the present viewpoint is sodium; the most important acid is chlorine, and the most important salt is sodium chloride. Chlorine is easily lost in large quantities from the body in the form of hydrochloric acid by excessive vomiting or through gastric or duodenal fistulas. There ensues the condition known as alkalosis or, better, hypochloremia. This is readily detected by blood chemistry examination. The normal plasma chloride value is 600 mg. per 100 cc. When this falls it is at first compensated by the buffer substances of the body whose function it is to maintain a fixed reaction of the body fluids. Notably, for example, the carbonic acid present in weak combination with base is detached from its combination and employed to neutralize the base now present in excess due to loss of its natural balance, chlorine. This leads to a rise in CO_2 content in the blood, also readily recognized by laboratory methods. As chlorine is further lost the compensating mechanism becomes unable to maintain the balance and uncompensated alkalosis is established. Severe tissue damage now occurs, notably to the kidneys, whose excretion diminishes, casts and blood appear in the urine and the blood urea nitrogen rises. It was thought for a time that this rise of blood urea was due to renal damage and many of these cases were thought to have died of uremia. Dr. Eiman and Dr. Karr in the Abington Memorial Hospital have shown that it is in reality a compensatory phenomenon by which the body retains a metabolite which under normal circumstances should be excreted but under the present conditions must be held to help maintain the osmotic pressure of the body fluids. If fluid and chemical balance be restored and the patient not already fatally damaged, the kidneys will again excrete the excess of urea and return to normal.

A case which illustrates a number of these

points was encountered by the writer at the Presbyterian Hospital in Philadelphia in 1929. It has appeared in the *Annals of Surgery* of that year under the title "Alkalosis Simulating Chronic Nephritis," but in the light of our more recent knowledge it appears as a case of true hypochloremia, with the alkalosis and azotemia as secondary effects. Example: When I first saw the patient he was lying comatose and very nearly dead. He was about 41 years old, with a history of "stomach trouble" since 14 years of age. Of late his symptoms had included postprandial discomfort and sensation of fullness in the stomach. This was relieved by vomiting at first, but for many years this symptom had not been conspicuous. He had acquired the habit of emptying his overfilled stomach by a tube. He had been admitted to the hospital twice before, each time in a semi-stuporous state. On one of these admissions, about seven years previously, an x-ray diagnosis of gastroptosis was made. Each time, because of a high B. U. N. figure and stupor on admission, he had been diagnosed uremia and each time on supportive treatment he had improved and been discharged. On this occasion, however, he had not improved on these measures, and when I first saw him his B. U. N. was nearly 100, his urine was loaded with albumin and casts, and he was unconscious. Despite the high B. U. N. the man's blood pressure was only 108/68, and his clinical condition impressed me with its similarity to some cases of surgical alkalosis. I ordered a complete blood chemistry examination. This showed his B. U. N. to be 120, his CO_2 combining power to be 90, and his blood chlorides below 200. Salt was being withheld on account of the supposed nephritis. Forthwith, it was decided to make every effort to correct his blood chemistry. He was administered whole blood and salt solution by vein, on repeated occasions. Inside of 12 hours he was conscious, and finally after five days his blood chloride level was brought up to normal, with a result that his CO_2 came down to 55 and his B. U. N. rapidly approached normal. It was later found that he had a pyloric stenosis from an old healed peptic ulcer. His attacks always followed prolonged vomiting or self-administered gastric lavage. I was able to

perform a posterior gastroenterostomy, and he was discharged with his urine free of albumin and casts and his B. U. N. normal. Evidently, vomiting would cause the loss of such great quantities of HCl that a state of hypochloremia, with its resultant azotemia and alkalosis would occur, and the patient would go into coma. It shows how easily the syndrome of hypochloremia and azotemia may be mistaken for uremia.

Hypochloremia to some degree is frequently met with postoperatively. It may be foreseen in conditions associated with large loss of gastric and duodenal contents. The prolonged use of the Jutte or Levine tube to keep the stomach empty is of great value but is likely to produce hypochloremia which must be guarded against by liberal infusion of salt solution. If unrelieved, it frequently results fatally and the pathologist will not give you the cause of death. The blood chemistry examinations—chlorides, urea, and CO₂ will give you the diagnosis and also the necessary check by which the chemistry can be restored to normal. Frequent estimations, at least once a day, sometimes oftener in acute conditions, are desirable. In marked hypochloremia, hypertonic NaCl solution, 500 c. c. of 2% may be given.

Hyperchloremia may occur and is also serious. It is uncommon and we know less of its effects. It is most likely to occur in chronic renal disease, where the concentrating capacity of the kidney is impaired and excess salt is eliminated slowly. This can be prevented by care and blood chemistry estimations. Occasionally acid is found in excess in the plasma. This is usually due to retention of abnormal metabolic acids by a damaged kidney. It is indicated by a normal chlorine content, with a low CO₂. A useful means of neutralization is to administer a one-sixth molar solution of sodium lactate, which is isotonic, as recommended by Hartman. Similarly, deficient calcium can be detected and supplied, excessive creatinine is measurable and attention devoted to its elimination.

The value of infusion of glucose solutions has been widely recognized and needs little remark. Not only are they useful in combatting dehydration but they furnish energy in the most available form and thus aid the

automatic agencies of the body in overcoming chemical imbalance of whatever nature. Blood transfusion must never be forgotten, as it is often the ideal fluid.

We have yet much to learn before we can lay claim to such a knowledge of the chemical reaction and composition of the blood and body fluids as to be able to assay, replace and balance at will, but enough is known to inspire the hope that we can now be more exact and definite in certain phases of therapy that only a short time ago were on an entirely empirical basis, and enough is known to assure you that lives can now be saved by the application of the more exact methods at present available.

By way of illustration I append brief notes and graphs illustrating the effects of dehydration and also one of hyperchloremia.

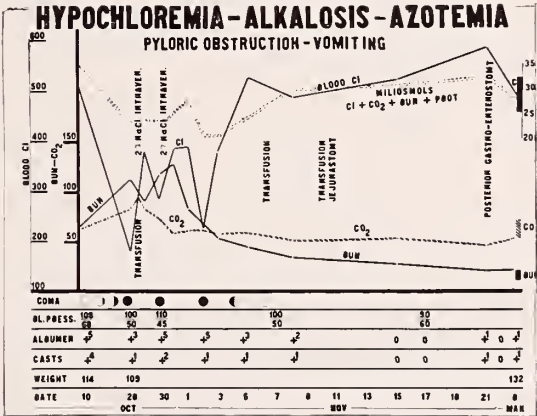


Figure 1. Hypochloremia
Showing the inverse relationship between the blood chlorides and the CO₂ and blood urea nitrogen. Dark circles indicate coma associated with extreme chemical imbalance and disturbance of osmotic pressure.

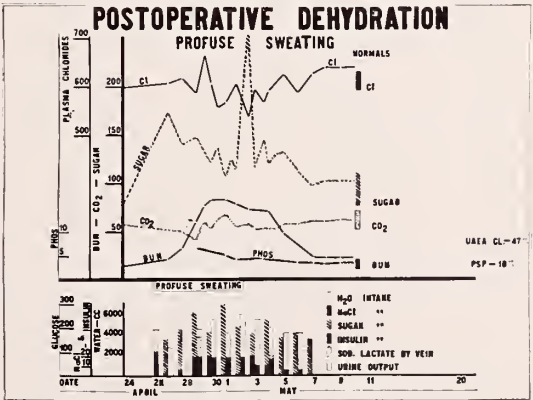


Figure 2. Effects of Dehydration
The patient was a man aged 71, who had been sick for many weeks with pain and tenderness in the

gall-bladder area and fluctuating fever and jaundice: a typical instance of cholecystitis with stones in the gall-bladder and common duct. Operation was cholecystectomy and choledochostomy. The man's condition was not good and the operation was difficult and fairly long. He was a mild diabetic as well. In first 24 hours he received about 4500 c. c. of fluid subcutaneously and intravenously. The urine output was only about 200 c. c. Sweating was extraordinarily profuse, drenching the bed several times a day. It is probable that the loss from this source was as much as 2000 c. c. in 24 hours. Unfortunately, through a change of internes and misunderstanding of orders, he received only a little over 2000 c. c. that day and the following day only 3000 c. c. Extreme dehydration resulted, with dry tongue, urine output down to about 100 c. c. daily, with rise in the blood urea nitrogen. He became irrational and the prognosis was grave. The situation was then appreciated and fluids stepped up 4500, then 5000, then 6000 c. c. daily. Sweating diminished, the urine output rose, his mental condition cleared and he went on to a satisfactory recovery. The acidosis due to retention of abnormal acids in this case was combatted by sodium lactate intravenously.

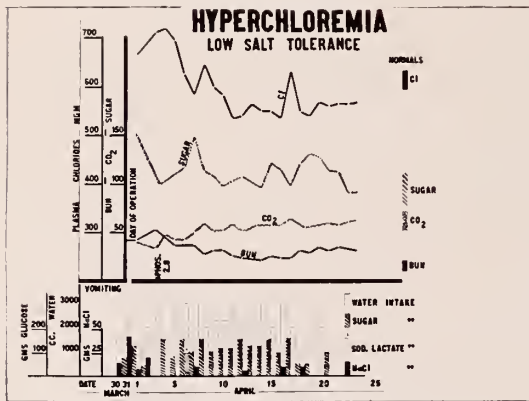


Figure 3. Hyperchloremia (Low Salt Tolerance)

I have had no personal case of hyperchloremia but have knowledge of several and we can state that it is dangerous and precautions must be taken to avoid it. The following case is from the urological service of my colleague, Dr. Alexander Randall in the Abington Hospital. A man aged 66 had suffered for 10 years with severe symptoms due to benign prostatic hypertrophy and ureteral calculus. Two unsuccessful attempts had been made to operate upon him elsewhere in 1931 and 1932, which were defeated in each instance by collapse under anesthesia. He had a weak myocardium, poor kidneys, a blood urea nitrogen of 37 to 47, and phenolphthalein excretion of zero. It seemed necessary, however, to take the operative hazard, and after preparation and still in precarious physical condition, operation was performed. The stone was removed from the ureter and a catheter drain placed in the pelvis of the pyonephrotic kidney. He survived and is now in greatly improved condition.

H. S., White Male: Age 66. Chart: This chart shows the difficulty which a damaged kidney has in getting rid of even small amounts of sodium chloride. Immediately after the operation he was given about 5000 c. c. of normal salt solution, and the next two days 1500 c. c. and 2000 c. c. of salt solution respectively, with the result that his plasma chloride level was pushed up to 710 (normal is 600). The next six days he was given no salt at all, his fluids being given as glucose solution. Thereafter he was given

sodium chloride on four occasions, each time with a corresponding spike in his plasma chloride level. If this man had been given his fluids routinely as normal salt solution, with no regard to his plasma chloride level, an alarming and dangerous state of hyperchloremia would have certainly ensued, with death. On April 5th, because the CO_2 had been persistently on the low side of normal, as a result of the excess of chloride ions, the patient was given a liter of 1/6 molar sodium lactate, with a rise in the CO_2 from 48 to 58 vol. %. It is our opinion that blind after-treatment on clinical indications, without chemical check, would have failed to carry him through.

DISCUSSION

PRESIDENT NILES: You have all heard this most interesting paper. I would like to hear it discussed.

DR. O. S. ALLEN (Wilmington): I don't think Dr. Pfeiffer needs to apologize for bringing this subject to us. I don't believe he could have brought a subject to us that should interest the surgeon and medical man any more than the subject that he has presented, and furthermore, it seems to me to be one of the great fields both in surgery and medicine. It is true, I think, that the surgeons have awakened to the fact long before the medical men. The medical man hasn't been aroused, but I think now he is getting aroused.

Personally, I have been interested in it for three or four years, although I don't know very much about it yet. The chemistry of the body, and also the chemical death, as you brought out, and finding nothing at post-mortem, have been most interesting phenomena.

Another thing you mentioned was the salt free diet. Medicine goes in fads, or cycles. One fellow comes out with a new idea, and all the rest of us follow it along. A few years back we didn't give the patient any salt at all. I long ago discarded that idea. I followed it along the same as everybody else, probably, for quite a few years, and the only thing I ever saw it do was to weaken the patient. So for several years now I have never deprived the patient of the ordinary salt that goes in the food. It is true probably, as you say, that in a few cases too much salt will do harm, but the ordinary amount of salt, I personally do not think does any harm. I am not a kidney expert or anything like that, but in nephritis I have never seen any bad effects, although I can see that where you

have an acutely inflamed kidney you probably would not supply that patient with salt. But certainly, in the ordinary case of cardiovascular disease with nephritis, I don't see any objection at all to the patient having salt.

I want to thank you for bringing this subject to us for it is a most fascinating subject.

PRESIDENT NILES: Is there any further discussion?

DR. R. W. TOMLINSON (Wilmington): Since Dr. Pfeiffer has brought up this pertinent subject of balance of the blood chemistry, I would like to cite a case which Dr. Bird and I saw in consultation. The patient had had a primary operation for hemorrhoids, and some seven days subsequently he went into intractable vomiting and lost considerable chlorides. At the time of the initial inspection he had a CO_2 which was down to 35. We didn't get a blood chloride estimation but I felt at the time, and Dr. Bird concurred with me, that he probably had hypochloremia. The symptoms exhibited might not have been strictly in accordance with Hoyle, for while his tongue was like the mud flats of a stream when the tide has been out several hours and it has baked in the sun, it was very red and very dry. The question naturally involved was whether this was a case of acidosis per se or whether it was a case of hypochloremia alone. I wanted to ask you whether there is any incompetency of the exhibition of hypochloremia with a lowered CO_2 of 35. We administered sodium bicarbonate in dram doses every hour, and gave 1000 c. c. of 10 per cent saline and 10 per cent glucose. The vomiting was eradicated and the CO_2 came up to 65, with an amelioration of all symptoms. But I have been considerably puzzled about the signs as to the rightness or wrongness of the contemplated administration of CO_2 , and the exhibition of salt with the sugar, and I would like to ask your opinion pertinent thereto.

PRESIDENT NILES: Is there any further discussion?

DR. ROBERT WARREN (Wilmington): As a pediatrician, I think probably we know as much about water balance, or see as many cases, at least, as the average man, and I want to say I have never heard (and I have had some good teachers in my day and I managed to go through all Dr. Hart's work) so

able and practical a presentation as Dr. Pfeiffer has given us today.

There is one thing I think should be mentioned about the administration of soda bicarbonate in what you consider the presence of acidosis. It may act, as Dr. Pfeiffer brought out; it may be, on the other hand, alkalosis, and if you administer sodium bicarbonate and get the carbon dioxide up to where chemically it is correct, you have only added to the alkalosis and masked one very good sign you have to show how your patient is actually progressing.

DR. B. S. VALLETT (Wilmington): I want to add a word about edema. There seems to be a little turning around in that respect too. Dr. Newburg, in the last issue of the *American Medical Journal*, says something about edema. He feels we are wrong in withholding water. In other words, he has shown cases that have excreted more water by giving water; patients with edema that have been allowed water have been able to excrete or get rid of edema, whereas if water is withheld the edema still persists.

PRESIDENT NILES: Is there any other discussion of this paper? If not, Dr. Pfeiffer will you close the discussion?

DR. PFEIFFER: Of the medical men I think the pediatricians have become most conscious of this matter of water balance, for the child's water balance is upset much more readily than the adult's. We owe a great deal to the pediatricians for what we know on the subject.

In regard to Dr. Tomlinson's interesting case, it would seem to me that the interpretation of that is this: primarily there was dehydration, with failure of elimination of the metabolic acids, so that the CO_2 , which is in reality an indicator of acid, shows acid in excess, although at the same time this man had hypochloremia due to vomiting, and you did the things indicated in both instances. You gave him alkali to neutralize his abnormal acids, but at the same time you were giving him chlorine. It is somewhat the same as the case of gall bladder disease which I mentioned. In that case you noticed that acid was present the next day, and the CO_2 was a little low.

There are a good many variations in watch-

ing a curve in chemical imbalance, so that we must not have any rule of thumb, and that is the point I have tried to make, that by clinical examination you cannot be sure. You must have available a laboratory to give you the exact data, for only in that way can you overcome the imbalance.

1822 Pine Street.

CANCER OF THE LARYNX, DIAGNOSIS AND SURGICAL CURE*

GABRIEL TUCKER, M. D.**

Philadelphia, Pa.

IMPORTANCE OF THE SUBJECT TO THE GENERAL PRACTITIONER

Cancer of the larynx if diagnosed early can be cured in over eighty per cent of the cases when it occurs within the larynx and on the vocal cord. In an analysis of two hundred consecutive cases it was found that 144 or 72 per cent of the cases of cancer of the larynx originated inside the larynx. When the patients were seen many of them were inoperable because of the extension of the disease. Probably every one of these 144 patients could have been cured by surgery if the cancer had been recognized and properly treated at its beginning. Laryngologists are very familiar with these facts and at every opportunity they should be presented before the general profession. In order to make early diagnosis the physician must realize that the early symptoms of cancer of the larynx are the same as the symptoms of benign lesions.

EARLY SYMPTOMS

The symptoms which will lead the patient to consult the physician are hoarseness or a local discomfort referred to the region of the larynx. In every patient between 18 years and 80 years of age who comes complaining of either hoarseness or local discomfort in the larynx or both, the possibility of beginning cancer should be uppermost in the mind of the physician and every effort should be made by careful examination to exclude this possibility. If this is done cancer of the larynx will be recognized in its beginning and surgery

will cure the great majority of the cases. The laity should be educated also as to this possibility so that they will come to the physician for examination. Nearly every case of cancer of the larynx gives a history of having been treated for chronic laryngitis for some time before it was realized that the patient had cancer of the larynx.

ETIOLOGY

Etiological factors in the development of cancer of the larynx are the same as those in any location in the body. The trauma of vocal abuse is apparently frequently an exciting cause. The use of tobacco and alcohol are also factors in the development of cancer of the larynx. Benign lesions of the larynx may become cancer. Possibly a factor in this change from the so-called precancerous lesions to cancer is the local irritation produced by the mass of the local lesion during phonation. Males are more frequently affected by cancer of the larynx than females, the proportion being about 10 to 1. The age at which cancer is most frequently discovered is between 40 and 50 although cancer has been reported in individuals as young as 16 years of age and as old as 90. Roughly speaking then we may say that any individual between 18 and 80 years of age is a subject for the exclusion of cancer if they present chronic hoarseness or have a definite sensation of local discomfort in the larynx.

LATE SYMPTOMS OF CANCER

As the lesion in the larynx extends and interferes with the vocal mechanism, hoarseness may become complete aphonia, dyspnea may develop from obstruction to the airway, difficulty and pain on swallowing and referred pain to the ear may be present. By the time these symptoms have developed there usually can be found evidence of extension to the regional glands in the neck. Cancer may exist in the larynx from six months to a year and a half and possibly longer if the lesion originates on the true cords without extension to the glands. In other portions of the larynx the extension to the regional glands is much more rapid.

DIAGNOSIS

The first step in the exclusion of cancer of the larynx is careful examination and study

* Read before the Medical Society of Delaware, Wilmington, October 8, 1935.

** Professor of Bronchoscopy and Laryngeal Surgery Graduate School of Medicine, University of Pennsylvania; Professor of Clinical Bronchoscopy and Esophagoscopy School of Medicine, University of Pennsylvania.

of the larynx with a mirror. Routine medical examination includes x-ray examination of the neck and chest, serological studies should be carefully carried out at this time. These examinations will help to show the relation of the laryngeal condition to other general or local disease. If the larynx cannot be satisfactorily examined with a mirror every portion can be inspected by means of the direct laryngoscope. The final step should be histologic examination of tissue removed from the lesion. This will serve also as a means of differential diagnosis. The removal of tissue for biopsy in the larynx where a suspicious lesion exists should be done in every case. Properly performed biopsy will not injure the structures of the larynx, will not cause rapid dissemination of the cancerous lesion and will not produce malignant change in a non-cancerous lesion. If cancer is found a histologic report on a fixed specimen of tissue can be obtained within 48 hours and immediate surgical treatment proceeded with.

TREATMENT

The treatment of cancer of the larynx is surgical removal of the cancer. The excision must include the entire lesion and sufficient of the surrounding tissue to be certain that the operative procedure goes well beyond the extension of the growth. In certain portions of the larynx the removal of a vocal cord is all that is required. In other locations the removal of the entire larynx may be required.

LARYNGOFISSURE

When the lesion involves the anterior portion of the true vocal cords, the anterior commissure, the immediate subglottic larynx, excision can be carried out by the technic of laryngofissure. The technic generally used is that devised by Chevalier Jackson or that of Sir Sinclair Thomson. Minor modifications are employed in the hands of various operators. The procedure is carried out under local anesthesia, requires hospitalization of the patient from ten days to three weeks and a very close follow-up observation of the patient for at least a year. The procedure will cure at least over 80 per cent of anterior intrinsic growths and saves the patient's larynx as well as his life. The close follow-up in these cases is emphasized for two reasons. First, to observe the development of the new vocal cord

which will form and aid and advise the patient in the development of a good voice. Second, to detect recurrence early so that further operative procedure can be carried out. The removal of granulation tissue by direct laryngoscopy is at times a great help in this regard and is done without a serious inconvenience or discomfort to the patient. These patients have a whispered voice immediately following the operation, and the majority of them develop an excellent voice. The end result after laryngofissure, if the proper technic is followed, will depend on the extent of the excision that was required to remove the cancer from the larynx. The patients who require the removal of both vocal cords will not develop as good a voice as those who only require the removal of one cord. In all cases, however, the other functions of the larynx are completely restored.

TOTAL LARYNGECTOMY

In cases of cancer of the larynx where complete excision of the growth cannot be done by laryngofissure total laryngectomy is the procedure of choice. The one stage technic of MacKenty is probably the procedure most frequently employed. The two stage operation, the preliminary tracheotomy is indicated in all cases where there is dyspnea due to obstruction of the airway by the growth. The procedure is carried out with the avertin and local anesthesia quite satisfactorily. The results are excellent if the cancer is still within the larynx. Many patients develop an excellent buccal voice, all of them can be taught to use an artificial larynx successfully.

CONCLUSIONS

Cancer of the larynx can be cured by surgical treatment in over 80 per cent of the cases in certain types.

The early symptoms of cancer of the larynx are hoarseness and local discomfort.

The general practitioner should understand that hoarseness may mean cancer, and he should help to educate the public to the fact that cancer of the larynx can be cured by surgery.

326 South Nineteenth Street.

DISCUSSION

PRESIDENT NILES: You have all heard this most interesting paper. I would like to hear a discussion.

DR. A. J. STRIKOL (Wilmington): There is no question but that Dr. Tucker has presented this subject in a very excellent way.

I wish to emphasize the viewpoint that not only the public but the medical profession should be made hoarseness conscious, just as Dr. Bloodgood and his co-workers have made us breast-tumor or lump conscious. In the early stages, as Dr. Tucker has shown us, we have almost eighty or ninety per cent cures, while it is intrinsic.

It is not very difficult to diagnose if it can be seen, especially if a biopsy is made. But when a patient is having hoarseness over a period of four or five or six weeks, I think the general man should consult a doctor who is specializing in nose and throat work and rule out the possibility of cancer. There are four things especially we think of in connection with chronic hoarseness. One is syphilis, the second is tuberculosis, the third is cancer, and the fourth is pachyderma. Those are the four most common. Of course there are other diseases, but these are the most common causes of a chronic hoarseness. As I said before, a biopsy and a direct laryngoscope are necessary if you don't succeed in visualizing by an indirect with a mirror, it is fairly easy with a direct laryngoscope using the Jackson or Haslinger instrument.

It is curable. It is possibly one region where the success is greater in curing cancer than in any other part of the body.

PRESIDENT NILES: Is there any other discussion? If not, I might say at this point that I have been so thoroughly impressed by the findings and by the importance of a diagnosis of these conditions that I feel it is very sad indeed that Dr. Tucker could not examine a great number of the members of this Society, because if talking is one of the cardinal causes of cancer of the larynx I am sure he would find a number of those cases in this Society.

I will now ask Dr. Tucker to close the discussion.

DR. TUCKER: I have nothing to add. I want to express my thanks for the discussion and my thanks to the Society for the privilege of being here.

WOMAN'S AUXILIARY: A. M. A.

History teaches us this great lesson—that there is a goal in all human affairs. As we pause to glance back over the fourteen years of our Medical Auxiliary history, we find that our goal is even greater than our founders visualized.

Like other great movements, our nation was being prepared for our coming. With the advent of the automobile, our country began to unfold itself. The doctor, who had long realized his limitations, found that now he was able to go forth and seek the knowledge he desired. With him on this great adventure, he took his wife, who had also dedicated her life to the practice of medicine. At his meetings the doctor found the knowledge which he was seeking, but the wife untrained in leisure soon tired of her aimless trips. She gained much from her contacts with other doctor's wives, and after talking with them she realized that there were many things that a doctor's wife might do to help his profession. So, our great American Medical Auxiliary was conceived. First, as a county auxiliary, then a state auxiliary, and finally a national organization.

We find that in several states, the county auxiliary had been discussed, but our records show that Texas had one of the first known Auxiliaries to an organized county medical society. In the Texas State Medical Journal, in 1919, we find the signed birth certificate of the Medical Auxiliary to the Texas State Medical Society. In St. Louis, in 1922, Mrs. Samuel Clark Red, who was then completing her two-year term as state president, appeared before the House of Delegates of the American Medical Association, and requested that body to accept a motion for the formation of a Woman's Auxiliary to the American Medical Association. This request was granted. Thus was laid the foundation of the American Medical Auxiliary, and upon this foundation each of our succeeding presidents have given to the Auxiliary added strength, and nourishment, for its growth.

It is with pride in their achievements that we name our past presidents: Mesdames Samuel Clark Red (three terms), Seale Harris, Franklin P. Gengenbach, John O. McReynolds, Allen H. Bunce, George H. Hoxie, J.

Newton Hunsberger, Arthur B. McGlothlan, Walter J. Freeman (deceased), James F. Percy, James Blake, Robert W. Tomlinson.

At the close of the first annual convention of the Auxiliary in San Francisco, 1923, Mrs. W. A. Wood, first National Recording Secretary and President of the Texas State Auxiliary, presented the organization with a gavel made from the Texas Oleander Tree. In presenting the gavel, Mrs. Wood gave an original poem, from which we quote the following lines:

As when the sea-shell pressed to the ear—
Gives forth the sea song we so long to hear,
So may this gavel in our President's hand
Give up sweet strains of our loved "Texas
Land."

Sing soft to our women—North, South, East
or West—

Of the "Lone State of Texas" that loved us
best

For she gave of her "Spirit" on our natal
day

In the land of Missouri—that glad morn in
May.

* * * * *

You grew by her waters—were kissed by her
spray

Waved in her breezes—day after day—

You're brim full o' memories of your dear
Texas land

And you're fit to be Queen of our A. M. A.
Band.

To Mrs. S. C. Red, the doctors and their
wives owe a great debt; for during the early
days, we find that it was her courage, wisdom
and vision that kept ever before us—our Goal.

Mrs. William Hibbitts,

National Historian.

DELAWARE ACADEMY OF MEDICINE

The Delaware Academy of Medicine participated in the second annual Delaware Art Week, May 3 to 10, 1936, by displaying in the library an exhibit showing "Art As Applied to Medicine."

In connection with this subject a few excerpts from Dr. Henry E. Segrist's recent paper on "The Historical Aspect of Art and

Medicine" (Bull. Inst. Hist. Med., Johns Hopkins Univ., April, 1936) are apropos:

"Art and medicine—they are both aspects of human civilization and yet it would be difficult to imagine two more different fields of human activity.... However, as soon as we approach these two fields historically, we will find that the historian of art and the historian of medicine have a great deal in common.... In other words the medical historian can help the historian of art in interpreting the subjects of quite a few works of art.... and there can be no doubt that pictures, artistic representations of any kind, can add a great deal to our knowledge of medical history. They illustrate the texts, supplement them and, in quite a few cases, pictures are the only sources that we have....

"It was recognized very early that illustrations can add to the clarity of medical and scientific books.... But quite apart from such illustrations that were to serve a definite medical purpose, it is obvious that other artistic documents that were created without any thought of medicine can be important sources to us through the subject they happen to represent....

"Diseased organisms have been represented very often by artists.... the pathos of certain diseases appealed to the artists;... there is comedy, burlesque even in some other pictures. Whenever a satirical artist wanted to ridicule a medical subject, he pictured a dental or a gouty patient....

"Works of art also contribute to our knowledge of the physician's doings. We naturally have to consult literary sources to know what a physician's therapy was but pictures show us the physician himself, the way he dressed, the way he acted. They reproduce the whole atmosphere of the doctor's office in various times.... Doctor and patient are a popular subject with them (the Dutch painters) and have been represented endless times naively, maliciously, with a touch of irony and always very realistically...."

At the request of physicians and dentists reference material has been collected recently on the following subjects: The duties of a public health officer, Pelvic inflammatory dis-

ease, Intra-spinal injections for the relief of pain, Vincent's angina, Diabetes in children, Palliative treatment of cancer of the stomach, Open bite malocclusion, Trichinosis and the Treatment of purpura haemorrhagica.

The reference service given in this library is worthy of mention, since this is a field omitted in many of the larger libraries, the readers being required to gather all their own references. Any physician or dentist wishing to read on a special subject need only telephone the library and the references will be collected and made ready for his use at the time desired.

It should be noted that journals may be borrowed from the library for one week and books for two weeks, subject to a renewal of that period in case they have not been called for by another.

Milk Deliveries and Floods

A noteworthy contribution to public health during the recent flood emergency was the efficient and often extraordinary maintenance of deliveries of pure milk under the most adverse conditions. Reports from health officials and medical authorities in the flood-stricken regions state that in practically all instances pasteurized fresh milk was delivered to persons while they were still unable to evacuate their homes in the flooded areas.

In the Pittsburgh area milk deliveries were made in power boats, row boats, canoes, flat boats and all manner of water craft. All milk was pasteurized and when lights failed, work in the plants proceeded by candle light with executives manning equipment along with the plant forces, and office staffs turned into helpers. In spite of the force with which the flood swept into Pittsburgh the trained distributors of milk met all requirements of state and city boards of health.

In New England airplanes were used to fly spare parts of pasteurization equipment to places out of the flood zone where milk could be prepared for use of flood victims. In Connecticut the Hartford milk plants were put out of commission by failure of power, but milk plants in unaffected areas pasteurized ample supplies of milk which were taken into Hartford by trucks carrying row boats,

through roundabout ways. In one case trucks had to travel a round trip of 250 miles to get milk to East Hartford by avoiding flood waters, a trip that in normal times is only six miles.

Dr. Ray P. Moyer, Director of Health of Pittsburgh, stated:

"The dairy companies operating and distributing fluid milk in Pittsburgh and the surrounding area stricken by the disastrous flood are deserving of commendation for the manner in which they met the emergency and continued delivery of pure, pasteurized milk.

"Laboring under the handicaps of power, water and telephone curtailment and with heavy snow putting the milk supply trucks coming to the city under discouraging difficulties and local delivery forced to lengthy detours by flooded streets and bridges the dairy companies kept up their supply to meet all needs.

"Upon action of the city health department utility service was made available to the dairies to care for the pasteurization of milk and at no time during the flood was other than pasteurized milk distributed to the public.

"Water service was completely shut off at various times in practically all sections, this, with the hazards of public health always imminent under such conditions and with hundreds of produce-laden freight cars under water, made an ample supply of pure, pasteurized milk doubly imperative. In addition to the normal needs there was great need for the homeless and destitute through Red Cross operations.

"The Pittsburgh district dairy companies carried on in an eminent manner with the full confidence of the health department which was taxed to the limit supervising other food supplies and with sanitation problems."

The efforts of members of the dairy industry during the floods have strikingly illustrated the great progress made in supplying clean and safe milk to consumers in this country and have amply justified the activities of public health and medical authorities in working with the dairy industry to safeguard our market milk supplies.

EDITORIAL

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PREPAID DOCTORING

Under the above caption there appeared in *Time*, for April 20, 1936, in the section devoted to "Medicine," a short article that seems to indicate that *Time*, as evidenced by its medical editor, is not particularly friendly to the medical profession, or at least to the A. M. A. Correspondence with *Time*, however, elicits the statement: "You may assure your readers that neither *Time* nor the editor of its Medicine department has any unfriendly feeling towards the A. M. A. It happens that our relations with the A. M. A. headquarters have long been decidedly cordial, and continue to be so." The article follows:

Prepaid Doctoring

Three Milwaukee doctors last week went through the unpleasant experience of being ejected from their county organization, for a violation of professional ethics. Their sin: They took fees (\$1 per month) from well

people in return for which they promised to treat their illnesses if and when.

The American Medical Association has developed an acute case of nervous indigestion ever since depression knocked doctors off their economic feet. Few of the 200 and more schemes which doctors have invented to earn an honest dollar have set well with A. M. A. None has proved more revolting to that potent national body than the repayment plan which Milwaukee's Drs. John Edward Rueth, 46, Adam Lee Curtin, 49, and Herbert Carl Dallwig, 45, recently instituted.

The Milwaukee scheme is essentially the same as that profitably developed by Drs. Donald Edison Ross and Harry Clifford Loos in Los Angeles, Charles Dudley Saul in Philadelphia.

For \$2 a month, paid in advance, clients of the Ross-Loos Clinic get any kind of doctoring or surgery they may require. This looks very much like the turnip of medical insurance and the beet of corporate medical practice, both of which nauseate the A. M. A. When Drs. Ross and Loos acquired 40,000 clients and a staff of 50 doctors, the A. M. A. expelled them. Subsequently lawyers forced the A. M. A. to take Drs. Ross and Loos back into the fold, on the technicality of an unfair trial.

The A. M. A. could not expel Dr. Saul because that rich homeopath is not a member. But A. M. A. members could try to prevent him from operating his Philadelphia prepaid medical service by having him cited as an unlicensed operator of an insurance scheme. Dr. Saul retaliated by having his two brothers, both potent Philadelphia lawyers, tweak the A. M. A. nose where it stuck into Pennsylvania business.

In Milwaukee Drs. Rueth, Curtin and Dallwig, expelled from the A. M. A. last week, hired a lawyer who bravely shouted: "They will resort to every means at their disposal to protect their standing as ethical practitioners."

The eighty-seventh annual session of the American Medical Association will be held in Kansas City, Missouri, May 11-15, 1936. The House of Delegates will convene at 10 a. m.,

Monday, May 11, at the Hotel Muehlebach, Delaware's only delegate being Dr. Charles E. Wagner, with Dr. Stanley Worden as alternate. All but two of the sections will be housed in the magnificent new \$6,000,000 municipal auditorium, the main arena of which seats 15,000 persons, is completely air-conditioned, and is considered by engineers to have the finest lighting and acoustic properties of any similar auditorium in the country. The auxiliary theatres and committee rooms seat an additional 7,000 persons; the exhibition hall and foyers provide 150,000 square feet of space.

An unusually attractive scientific program has been provided, and the scientific and technical exhibits promise to surpass those of recent years. The hotels are excellent and large, but early registration is advised. The railroad charge will be one and one-third fare, on the certification plan.

CANCER RESEARCH

Fifteen years ago laboratory research in cancer had reached a point where it was known that cancer could be caused at any time; (1) by repeated applications of tar to the skin of the mouse, (2) by transplantation of cancer cells from one animal to another of the same species, (3) by breeding special lines of mice that inherit a tendency to special cancer, and (4) by inoculating fowl with cell free filtrates of the Rous sarcoma. Clinically, of course, other irritants and conditions were known factors in cancer such, for example, as the overuse of tobacco, repeated sunburns and radium and x-ray. The lines of research developing from the four experimental facts given above have developed an amazing and interesting group of data, but for the most part these lines have tended to keep themselves distinct from each other. The studies of tar have culminated in brilliant researches begun in London and continued elsewhere and have led to the isolation of many pure chemicals such as dibenzanthracene, that are carcinogenic. The transplantation experiments have made progress, but it has not been so striking. The heredity experiments, especially those of Little and his co-workers, have put this experimental tool on a relatively firm footing. The filtrable virus experiments have

been very difficult to understand or explain when compared with the other lines of cancer research.

Now there comes a report from the London Cancer Research group headed by Kennaway and confirmed in Philadelphia that pulls together three of these lines of research into an extraordinary synthesis that opens up great hopes for the future. These workers, in brief, have found that a cancer may be initiated by dibenzanthracene. It may then be transplanted serially through ten different animals thereby diluting the original irritant injected to a point certainly greater than one to one billion, of its original concentration and well below any level that could be identified chemically. At this point they then produce an ultrafiltered extract of the tumor and find that this extract has the power of initiating the same kind of cancer when injected into a new host. This brilliant experiment means that we must postulate that at some time in the course of the growth of cancer a new product is formed by the cancer which is of a size smaller than the size of the smallest visible bacteria and infinitely smaller than the size of a cancer cell, and which may or may not be a living virus which has the property of reproducing in a new host the cancer from which it was derived. This specific reproduction of a special kind of cancer puts it in a different class from the class of substances chemically isolated which produce cancer, but in the same class as the substance transmitting the Rous sarcoma of fowls. The irritant substances, such as the dibenzanthracene mentioned above, produce any kind of cancer of special cell type according to the cells on which they act. They may be either sarcomas, carcinomas, or leukemias according to circumstances.

The development of these lines of research to the point where knowledge is available that is useful in the prevention of human cancer has not yet been reached to an important degree, but with these experimental tools this knowledge may develop almost before we realize it. One would not have to be particularly sanguine to say that actually now the promised land in this field of endeavor is in sight and we have only a few more rivers to cross.

Editorial: *N. E. J. of M.*, April 30, 1936.

MISCELLANEOUS

SCIENTIFIC DISCOVERIES AND PATENTS

The problem of medical patents has been agitating the medical profession increasingly in recent years. The "Principles of Medical Ethics" says quite plainly "It is unprofessional to receive remuneration from patents for surgical instruments or medicines; to accept rebates on prescriptions or surgical appliances, or perquisites from attendants who aid in the care of patients."

Through the centuries, medicine has given freely of its discoveries for the benefit of mankind. Vaccination against smallpox, inoculation against hydrophobia, digitalis, and innumerable other methods and medicaments became the property of all who cared to employ them in the control of disease. Now, as medicine has become more complex, involving technical assistants in the fields of biochemistry, physiology, physics and associated branches, great numbers of people who give their full time to the work of the hospital, the laboratory or the care of the sick work with the medical profession but are not bound by the same ethical principles. Moreover, the universities have developed preparations and techniques in their laboratories at considerable expense to the institution, and workers have seen fit to turn over to the universities the control of such products. Thus insulin is controlled by the governors of the University of Toronto; scarlet fever preparations are controlled by the Scarlet Fever Committee, Inc.; vitamin D preparations by the Wisconsin Alumni Research Foundation of the University of Wisconsin; the Sperti patents by the University of Cincinnati; the Zucker patents by Columbia University; the Doisy patents are controlled by the St. Louis University School of Medicine, and several patents are the property of Stanford University and the University of California.

The American Association for the Advancement of Science published in 1934 a report on this subject with the arguments for and against commercialization of university patents. The problem continues to be studied by the National Research Council and by many other bodies. The question is one that

has concerned the House of Delegates of the American Medical Association, and the Board of Trustees even now is engaged in a survey of the situation.

In the current issue of *Harpers Magazine*, George W. Gray presents an interesting analysis of the present status of affairs as it concerns problems not only in the medical field but in science generally. He points out that separate patent-holding agencies were operating at the beginning of 1936 at the Universities of Cincinnati, Columbia, Cornell, Iowa State College, Lehigh, Pennsylvania State College, Purdue, Rutgers, Utah, Wisconsin, and Wittenberg College. Moreover, the state universities of Illinois and Minnesota, the California and Massachusetts Institutes of Technology, and the Franklin Institute of Philadelphia control either directly or by a committee patents contributed by research workers.

There seem to be three contrasting methods of financial control of university patents: (1) the method of the general holding company, (2) the method of the university holding company, and (3) the direct or committee method. Apparently these methods were established with the chief objective of protecting the public against substitutes and makeshifts. By means of the patent, the inventor can insure that whatever is offered to the public under his invention is technically right.

Mr. Gray feels that, when a new device involves the purity of a process or of ingredients, the public interest is best served by patenting. However, service of the public interest by insuring purity and quality of preparations is far different from commercial exploitation of the fruits of university research.

One of the most cogent arguments now advanced concerns the relationship of a university or research institution to taxation. Endowed universities and research institutions are usually exempt from taxation. They are non-profit institutions. As an endowed institution, free from taxation, such institutions owe a definite duty to the public, which bears the burden of taxation. This is certainly a practical consideration which may well en-

gage the authorities in the universities responsible for administration of commercially valuable patents.

Again, the exploitation of patents by various universities places them in direct competition with one another, as, for example, the three patents concerned with the development of vitamin D. Under such circumstances the results of current research are jealously guarded and all research probably delayed through failure of research workers to communicate with one another. Indeed, even workers in the same university develop a competitive spirit likely to destroy entirely the type of co-operation in science which is responsible for much of our current progress. This conception of scientific research is beautifully expressed by Mr. Gray in the following paragraph:

"Scientific research, as a recognized full-time occupation, is one of the youngest of the professions. It has come up out of the basements and garrets of the early experimenters, and has attained status among the most honored of the callings of man. Perhaps the laboratory is pressed with economic necessity—but is that warrant for changing its charter? Possibly it can support itself handsomely and independently—but can it survive the shiftings of bases and the readjustments of outlook which commercialization entails? One of its greatest glories is its intellectual integrity and independence—but can this reputation continue unsullied in the clash of competitive sales campaigns of patented commodities, infringement suits, and other contentions of the marketplace in which the financial interest of the research institution is on one side of the dispute?"

A final consideration concerns the rights of the physician. When our civilization was such as to safeguard the physician, considering him as one who gave freely of his knowledge and service to mankind and therefore entitled to special consideration, physicians might well offer freely their time, their service, their original contributions. Our complex civilization of today places ever new burdens on a willing bearer of mankind's tribulations. Surely there was never a problem more com-

plex offered for solution by the best minds of the medical profession.—*Jour. A. M. A.*, April 18, 1936.

PROPAGANDA FOR REFORM

The Tryparsamide Patent and Trademark.—The Council on Pharmacy and Chemistry reports that tryparsamide is an arsenical preparation originally proposed for treatment of trypanosomiasis but now used as well in certain cases of syphilis of the central nervous system. The product is at present manufactured and marketed by Merck & Co., Inc., under U. S. patents and trademark registration by license from the Rockefeller Institute for Medical Research, which owns both the patents and the trademark. It was accepted by the Council for inclusion in New and Non-official Remedies in 1925. The justification for patenting a worthwhile medical preparation lies in the opportunity this procedure affords of controlling the quality and purity of the preparation involved for the purpose of protecting the public from the marketing of specious or impure products. This is particularly true of a drug such as Tryparsamide, which requires unusual care in its preparation to insure that degree of purity which is essential for proper use. The patent on tryparsamide expired September 24, 1935. On October 8, 1935, the secretary inquired of the Rockefeller Institute whether it intended to dedicate the name Tryparsamide to the public as a non-proprietary designation on the expiration of the patents. The institute informed the secretary that it not only planned to dedicate the name to the public as a non-proprietary designation but had already taken steps to that end both in the United States and in numerous foreign countries. The Council, therefore, adopted Tryparsamide as a non-proprietary name for the product which has been marketed under that name as a proprietary designation. (*J. A. M. A.*, March 7, 1936, p. 781).

Felton's Serum and Diathermy in Pneumonia.—Physicians who have the largest experience in the management of the pneumonias regularly use refined and concentrated serums in the treatment of those pneu-

monias for which serums are available. Physicians with less experience and opportunity for observation of the pneumonias are more frequently using serum in the treatment of pneumonia whenever they have been educated to do so by such intensive campaigns as have been undertaken in Massachusetts and New York. Physicians may refrain from the use of Felton's serum because of ignorance of its benefits, fear of untoward serum reactions, or mistaken motives of economy. Modern methods for differentiating and studying the pneumonias have changed the point of view concerning their treatment. Stress is now placed on specific treatment and prevention and cure for bacteremia, which is present in most fatal cases. Serum treatment requires knowledge and skill comparable to those necessary for surgical procedures. The prompt dramatic termination of the disease is a gratifying reward for effort. Immediate serum reactions are infrequent and with some lots they do not occur. Ophthalmic and skin tests for sensitivity should be made before giving serum. To a certain extent the amount of serum required depends on the earliness of administration. The cost for serum is frequently no more than the expense for operating room and dressings for patients suffering from appendicitis. Against the cost of the serum should be offset the reduced cost of nursing and of oxygen therapy, the shorter convalescence, the more rapid return to work, and the less frequent occurrence of complications.

John S. Coulter, in a recent review on medical diathermy (*The Journal A. M. A.*, January 18, p. 209), says: "In the management of pneumonia, medical diathermy does seem to be of definite benefit in reducing the severity of the thoracic pain. It is not an accepted specific treatment in lobar pneumonia." While oxygen is being administered diathermy should not be employed, because ignition of the bed clothes may occur from small sparks in the presence of oxygen-enriched air.—(*J. A. M. A.*, March 7, 1936, p. 872).

The New Ergot Alkaloid "Ergonovine."—The Council on Pharmacy and Chemistry reports that during the past year, communications from four laboratories have been published reporting the isolation of a new oxy-

toxic alkaloid from ergot. Until recently there has been doubt as to whether or not the principles reported by these laboratories were identical (termed "Ergotocin," by Kharrasch, "Ergometrine," by Dudley and Moir, "Ergobasine," by Stoll, and "Ergostetrine," by Thompson). In a joint signed statement (*Science*, February 28) these investigators say there is "no doubt that the alkaloid obtained in the four different laboratories was the same substance. . . ." Because it seemed impossible to establish undisputed priority, and because of possible conflict of the other names with the policy of the Council governing nomenclature, it was necessary that a suitable non-proprietary name which is not therapeutically suggestive be adopted for the new alkaloid. Not one of the several names proposed by the discoverers complies with the Council's requirements. The Council therefore determined to adopt the new non-proprietary name "Ergonovine" (ergo-novine). (*J. A. M. A.*, March 21, 1936, p. 1008).

Farastan or Mono-Iodo-Cinchophen.—In 1930 the Council on Pharmacy and Chemistry declared Farastan not acceptable for inclusion in New and Non-official Remedies because "it is an irrational preparation marketed with unwarranted therapeutic claims." At that time Farastan was claimed to be mono-iodo-cinchophen, a "new chemical complex" containing approximately 33.6 per cent of iodine. The U. S. Department of Agriculture, in a press release dated December 20, 1935, calls attention to the seizure of a shipment of "Farastan Mono-Iodo-Cinchophen Compound" because "the name was held to be false and misleading, since the article consisted almost entirely of cinchophen (97%)." This information is quite interesting in view of the manufacturer's oft-repeated claim that Farastan is a "synthetic compound of cinchophen and iodine" which is "more valuable than the older cinchophen products" because it is "more potent therapeutically and more easily tolerated." Those using cinchophen will prefer to employ products marketed under the pharmaceutical name with full knowledge of the potential dangers of this product and exploited without unwarranted and mislead-

ing claims. (*J. A. M. A.*, April 18, 1935, p. 1141).

Larostidin "Roche" Not Acceptable for N. N. R.—The Council on Pharmacy and Chemistry reports that in the latter part of 1934 and in 1935 the medical profession was deluged with propaganda for "Unquestionably the most notable advance in the medical treatment of Gastric and Duodenal Ulcer," Larostidin "Roche." According to the advertising, this is a 4 per cent solution of *lacro*-histidine-monohydrochloride in an isotonic medium. The Council questioned some of the claims made by Hoffman-La Roche, Inc., and initiated a series of experiments to determine the usefulness of histidine hydrochloride and Larostidin "Roche" in treating gastric and duodenal ulcer as compared with the diet-alkali regimen. The results of this investigation are reported in *The Journal A. M. A.*, April 25, 1935, p. 1468 (Martin, K. A.: "Histidine versus Diet and Alkalis in Treatment of Peptic Ulcer"). The investigator reported that the symptomatic and radiologic response of forty-one patients in the injection series was not quite so good as that of the forty control patients in the diet-alkali series, in either the initial or the sustained effects. As a result of its consideration of the paper of Martin and others, however, the Council concluded that, although there is at present insufficient clinical evidence for its evaluation, histidine hydrochloride shows promise of possible usefulness in the treatment of gastric and duodenal ulcer. The Council declared Larostidin (Hoffman-La Roche, Inc.) not acceptable for New and Non-official Remedies because it is marketed with unwarranted therapeutic claims, and voted to postpone further consideration of histidine monohydrochloride until adequate clinical evidence of its therapeutic usefulness is available. (*J. A. M. A.*, April 25, 1936, p. 1473).

OBITUARY

JOSEPH P. WALES, M. D.

Dr. Joseph Patten Wales died of pneumonia on April 16, 1936, after having been ill for almost three weeks. He was 62 years old.

Dr. Wales was born in Wilmington, May 22, 1874, the son of Dr. and Mrs. John P.

Wales. His father was once Mayor of Wilmington. A grandfather, John Wales, served as Secretary of State and as United States Senator and was one of the state's leading attorneys during the middle years of the last century. An uncle, Leonard E. Wales, was a judge in the Delaware courts and later served as judge in the United States District Court here. An ancestor, Major John Patten, served in the Continental army under George Washington.

He received his early education in the Friends School and was graduated from Yale University (Sheffield Scientific School) in 1894. He then took up the study of medicine at the University of Pennsylvania where he obtained his medical degree in 1898. Following a two-year internship he began as a general practitioner in 1900, several years later entering the specialized field of children's diseases.

He was a former president of the Medical Society of Delaware and of the New Castle County Medical Society. He was a member of the American Medical Association, Delta Phi Fraternity, the Young Men's Republican Club, Society of Colonial Wars, Sons of the American Revolution, Philadelphia Pediatric Society. Dr. Wales was on the staff of the Delaware and Wilmington General Hospitals.

Dr. Wales in his youth was prominent in athletics. For several years he was the state tennis champion. He was a member of the Y. M. C. A. baseball and football teams in earlier years. His favorite sport in later life was golf. He was a member of the Old Delaware Field Club.

He was surgeon for the city police department from 1904 to 1934, except for a ten-year period from 1913 to 1923. In May, 1935, he was appointed a member of the board of directors of the Department of Public Safety by Mayor W. H. Speer to succeed Henry P. Scott, Jr. For several years he was a member of the state Board of Health and Federal pension examiner for this district.

Dr. Wales was the last survivor of the original founders of Brandywine Sanatorium which was established in 1903. The present

child health centers throughout Delaware are the outgrowth of his plan in 1916 to establish stations where milk could be obtained for deserving poor families at cost.

Dr. Wales married Miss Elizabeth B. Gilpin in 1903 by whom he is survived, as well as by two daughters, Mrs. Thomas J. Craven, of New York City, and Miss Elizabeth G. Wales of this city; a brother, Leonard E. Wales, judge of the Court of Common Pleas of New Castle County; two sisters, Miss Isabelle B. Wales and Miss Elizabeth B. Wales, and two grandchildren.

Funeral services were conducted at his late residence on April 18, 1936. The interment was private.

BOOK REVIEWS

The Single, the Engaged and the Married. By Maurice Chideckel, M. D., Pp. 269. Cloth. Price, \$2.50. New York: Eugenics Publishing Company, 1936.

Chideckel's new book is not just another of the many on the sexual side of mankind; it is, in fact, one of the broadest in its class that we have yet seen. Written for the layman, it seems to the professional reviewer to be puerile in spots, yet the layman often needs repetition and emphasis, else he does not really grasp the idea. The style is serious yet entertaining; and the page is often punctuated with a sharp shaft of wit or a dart of subtle philosophy.

We do believe, however, that for a work for lay consumption too many drugs are mentioned—not that the patient would try to procure them without a prescription, but that the physician who did not prescribe them might be discounted in the patients' eyes, yet there is, among our leaders, no unanimity as to the therapeutics of progestin, folliculin, theelin, etc. Such controversial medicinals have no place in a lay manual.

However, this book is a most readable one and merits a wide circulation.

The Psychology of Love. By Paolo Mantegazza. Pp. 237. Cloth. Price, \$3.00. New York: Eugenics Publishing Company, 1936.

Prof. Mantegazza's book first appeared in 1872, as the first part of a trilogy on love. The work created a storm of protest, for the intrepid Italian author was writing things that had never been printed before. But to-

day, to the cognoscenti, Mantegazza's name and works are known and respected as only a great pioneer can be.

The present translation is by Herbert Alexander and preserves faithfully the almost lyrical style of the original. The physical and the psychic attributes of love are treated concurrently, as they should be. This is one of the great source-books of the modern science of sexology.

Bewildered Patient. By Marian S. Newcomer, M. D. Pp. 325. Cloth. Price, \$1.75. Boston: Hale, Cushman and Flint, 1936.

This very sensible manual tells the layman what medicine has to offer, and how to procure it. It covers a wide range of subjects, of which the best chapters are those on "Choosing a Doctor" and "Alarming Accidents." The latest of medical science and the best of medical ethics are expounded in a most readable style. We predict a wide circle of readers for this book.

Synopsis of Clinical Laboratory Methods. By W. E. Bray, M. D., Professor of Clinical Pathology, University of Virginia. Pp. 324, with 43 illustrations. Cloth. Price, \$3.75. St. Louis: C. V. Mosby Company, 1936.

This little manual is the most concise, complete and up-to-date laboratory guide the reviewer has had the opportunity to see. It covers the entire field of clinical laboratory work including urinalyses, clinical blood analyses, hematology, serology, bacteriology, parasitology, and a short summary of the more usual poisons from the laboratory standpoint. Many of the cuts are rather diagrammatic but they illustrate the text very clearly.

In the section devoted to urinalysis there is included a classification of the nephritides. This is always rather dangerous even in a complete work. Here, in a synopsis, such a classification not entirely acceptable to everyone, may possibly cause some confusion among medical technicians. In general, however, the author has been very careful to present only generally acceptable data. In several instances, where certain advances in medicine have been so recent that general acceptance has not yet been possible, the reader is given references for the opinion stated. This synopsis of laboratory methods should prove most useful to clinical laboratory technicians.

1789—MEDICAL SOCIETY OF DELAWARE—1936

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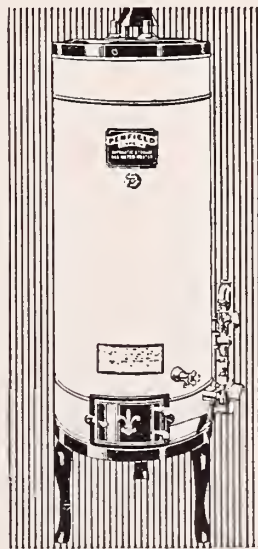
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CANNED FOODS AND THE PUBLIC HEALTH

V. FOOD IN THE OPEN CAN

• In September 1935, the facts about food in the open can were presented on this page. It was stated that there was no reason, from the standpoint of food poisoning, why food must be removed immediately after the can is opened. This statement bore the Seal of Acceptance of The Committee on Foods of the American Medical Association.

However, since that time, two incidents have occurred which lead us to present again the facts concerning food in the open can.

First, late last fall, a national organization dedicated to the relief of human distress during war and disaster, issued a list of precautions designed to reduce accidents in the home, in which it was erroneously recommended that food be removed from the can immediately. The Department of Agriculture detected this error and called it to the attention of those responsible for issuance of the recommendations. A correction was made as soon as possible but the damage had already been done. The original safety recommendations had meanwhile been issued in schools and newspapers throughout the country, thus giving further support to this old, unbased prejudice against canned foods.

Second, in the early months of 1936, a release regarding food in the open can was

made by a national press service to newspapers throughout the land. The strong inference was made in this press release that food left in the open can might become hazardous to consumer health.

This dissemination of misinformation, referred to in the two instances cited above, has caused an increase in the number of consumer inquiries concerning the safety of food in the open can. To reply to these requests for reliable information, we can well quote from a recent release made by the Department of Agriculture (1).

(1) U.S.D.A. Press Release, Feb. 23, 1936

"It is just as safe to keep canned food in the can it comes in—if the can is cool and covered—as it is to empty the food into another container. Thousands of housewives are firm in the faith that canned goods ought to be emptied as soon as the can is opened, or at least before the remainder of the food goes into the refrigerator—one of the persistent food fallacies. The question keeps coming to the Bureau of Home Economics in letters from home-makers.

"A few acid foods may dissolve a little iron from the can, but this is not harmful, not dangerous to health. Cans and foods are sterilized in the 'processing'. But the dish into which the food might be emptied is far from sterile. In other words, it is likely to have on it bacteria that cause food to spoil.

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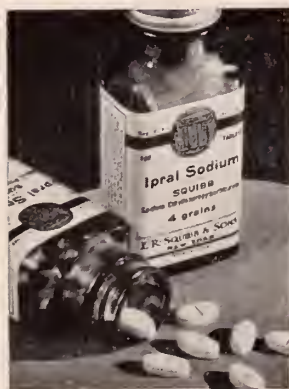
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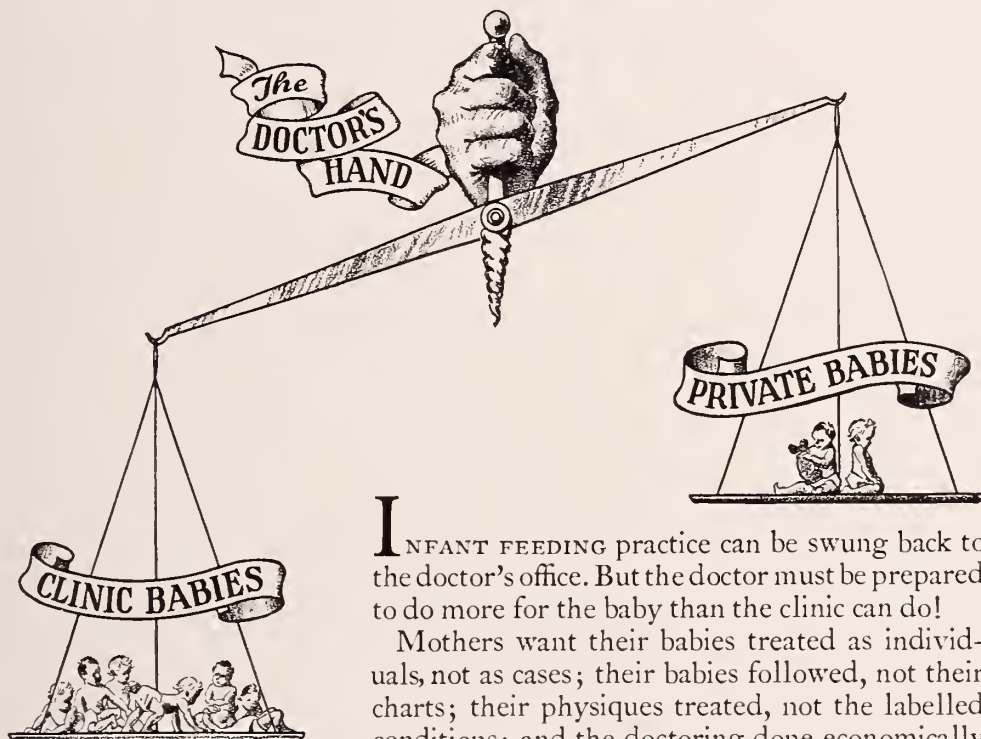
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PSYCHIATRIC IMPLICATIONS OF ENDOCRINE DISTURBANCES

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Psychiatry is still, as it has been for some time, fundamentally interested in the role that endocrines play in the etiology of mental diseases and in the determination of personality traits. There is no doubt that they are a causative factor of behavior problems, if not directly so, at least indirectly so through the personality reactions of the individual due to a failure to adjust because of the various physical and emotional symptoms which result. It is not hoped the science will ever reach such a millennium that it can change the individual at will but could it be proved that glandular dysfunctions are important etiological factors in the gross deviations of personality and should science be able to produce gland substances which would alleviate these conditions, much could be done to help the psychotic patient and unadjusted individuals in those cases where the condition is caused by other than simple environmental factors, since insanity, organic or functional, is based on a change in the intellectual and personality traits of the individual. That some of the mental deficiencies have been caused by endocrine disturbances has been established for a number of years. Unfortunately, very little new information has been discovered in this relation of an outstanding nature of late years, and with the exception of thyroid treatment of cretinoid and juvenile myxedemas, very little has been produced which will prevent or cure the deficiencies due to glandular diseases. This is possibly due to the fact that the body does not assimilate mouth-fed substances in such a fashion that they produce the same results as those sub-

stances directly secreted by the glands. Mouth feeding of ovarian and pituitarian substances at the Delaware State Hospital has been practically without results in those cases where it was definitely shown that abnormality of these ineretory organs existed. The results obtained from hypodermic medication have given slightly more favorable results, but are still far from satisfactory, even over long periods of medication.

Endocrinology and hormone therapy have a history all their own, even though of recent origin. Until the twentieth century it was practically disregarded by the medical profession, since it was not scientifically accurate and all the work was experimental in character. Today chemical formulæ of some of the hormones have been determined and physiological reactions definitely established by means of animal experimentation. The psychological reaction of the thyroid has been proven by the marked increase of intelligence in such children who have suffered from deficiency and are being treated by various thyroid extracts.

Ancient medical literature contains a description of almost all of the endocrines, some being named as early as the middle of the sixteenth century. It was two centuries later, however, that we find theories relative to their function. According to Engelbach, the history of endocrinology can be divided into three distinct epochs. The first may be considered as extending from ancient times to the middle of the nineteenth century and may be called the speculative era. The second epoch comprised the latter half of the nineteenth century and dealt with an experimental era and the physical effects of withdrawing. The third epoch, in which we now are, viz., the twentieth century, is biochemical in

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nature and deals as well with the effects of replacement.

At first an attempt was made to determine whether the endocrines were essential to life. By this means the origin of some diseases of unknown etiology was discovered, but it was only later that the correlation between the various glands was demonstrated and the interplay that existed between them was determined. As Virchow states, "The organism is a social mechanism," each part playing an important role in the activation of other parts of the human individual. From Faltas studies—we have the following three statements:

1. The effect of two different hormones may be synergistic or antagonistic.
2. One hormone may stimulate or inhibit the production of another hormone.
3. Relations existing between the different endocrines themselves, manifested by the fact that a hyper or hypo function of one gland may cause a regression or a progression in another.

It is estimated that there are over 260 possible paths of pairing influences in both hypo and hyper functions of the various glands. The complexities of the situation may be realized somewhat when we consider the fact that the secretions from one gland may stimulate that of a second gland, which, in itself, may inhibit the action of the third gland with a tendency to bring the physical functions back to normal. In order that endocrine treatment be successful, it must be recognized which gland is primarily affected and treatment directed toward the actual etiological factor of the disease complex. Should the wrong substance be used, the treatment is often ineffectual which may explain, to some extent, the failure of glandular therapy at the present date.

Endocrinology is a specialty of itself of rather vast proportions with many uncharted courses. The glands in the order of their importance are:

Hypophysis, thyroid, adrenal, pancreas, liver, parathyroid, gonads, thymus, pineal.

It is entirely true that hormones probably are secreted by other organs of the body but

the lack of exact data concerning them makes their discussion purely speculative in character. One or more hormones have been isolated from six different glands, viz., thyroid, hypophyses, ovaries, suprarenals, parathyroids and pancreas. Among the important hormones isolated are pituitrin from the posterior lobe of the hypophysis; adrenalin, from the medulla of the suprarenals; thyroxin, from thyroid; insulin, from the isles of Langerhans of the pancreas; growth hormones and sex hormone—both from the anterior lobe of the hypophysis, parathormone from the parathyroids; folliculen from the ovarian follicle; progesterin from the corpus luteum; theelin, from the ovaries.

Those glands which at present play an important role in psychiatry and personality disturbances are: hypophyses, thyroids, gonads and adrenals. It is entirely possible that it may be later found other glands play an important role but there is no confirmatory evidence at the present time.

Endocrinopathies are possibly hereditary in nature to a great extent, more so than actual history would indicate since the vagueness of the symptoms and the lack of general information often leads a family to statements which are not entirely accurate. Also, the condition does not manifest itself to any great extent in many cases until adolescence or later, in which case it is often considered acquired by the patient and generally the more pronounced abnormal bodily development will often lead the patient to the physician. Yet it can be determined that many of the symptoms were present to a mild degree early in life. Anthropological measurements early in life would bring to view many endocrinopathies at an age when therapy would be more effective. Emotionalism, infectious diseases, and nutritional disturbances have a direct effect on the glandular development. When we consider the minor types of dysfunctions which may be present, it is estimated, according to Engelbach, that the condition is universal and as frequent as non-endocrine diseases, and that also it is as amenable to treatment as any other chronic disease. It is pointed out that only ignorance and the lack of proper early treatment allows

the condition to continue until it is debilitating in character.

In considering those endocrines which seem to be the cause of the most outstanding types of cases found in psychiatric and mental hygiene work, we will first direct our attention to the thyroid gland. Thyroxin has been isolated and has been proved quite definitely as being the activating principle secretion. It is highly potent in its reaction, possibly more so than that of any other gland and contains a high percentage of iodine. It belongs to the group of accelerator hormones. The mental symptoms found in over-activity of the thyroid glands are irritability, loss of mental control, fits of temper, lack of initiative and concentration, poor memory and personality changes. In some cases manic phases may develop and in others—acute and deep depressions, ideas of reference, of persecution and even hallucinations may occur. They may resemble the manic depressive types of psychosis and may often be mistaken for them. It is still questionable as to whether or not the etiology of manic depressive psychosis may not be glandular in character. Its symptoms often resemble those of the neurotic individual with the one outstanding difference—that the disease syndrome is practically constantly without variation, while in the neurosis—variation is frequent, this variation being an important diagnostic sign. The basal metabolism test is not entirely diagnostic in character but it is helpful. The reading may be changed in pituitary diseases and by emotional state, and may even not be abnormally high in certain cases of hyperthyroidism. Hyperthyroidism causes a decrease in the tolerance of the body toward adrenalin. The Goetsch test is of importance in diagnosing obscure and latent types of hyperthyroid conditions. 5/10 cc of 1 to 1000 solution of adrenalin chloride is injected. In the normal individual, this dosage will cause practically no reaction, but in the hyperthyroid individual a definite reaction toward adrenalin is present. In hypothyroidism we find that two definite types of conditions exist—acquired and congenital. The congenital type is often called cretinism. True cretinism is not found in the United States but in Europe and Asia and is characterized by idiocy, cerebropara-

plegia and tetany, with a fibrosis of the thyroid and parathyroid glands. Cretinism as considered in this country is really a type of myxedema. In the true congenital type, an exceedingly rare condition when symptoms are present at birth, the infant is short-lived. It is grotesque and shows a complete absence of all thyroid tissue. The infantile and juvenile types occur later and show a rather characteristic picture—flat nose bridge, thick lips and tongue, drooling at mouth, prominent abdomen, sluggish circulation, subnormal pulse and temperature, dull mentality, apathy, dry skin, with psychic disturbances, with inability to distinguish right from wrong. The child is often without morals. Emotionalism is present. There is a tendency toward anti-social acts, the child being unable to recognize that his behavior is not social in character. The fontanelles do not close until late and there is a general reduction of all growth, mentally and physically. In the acquired myxedema due to operative or infectious conditions, the signs are obvious but not as marked. The hands become thickened and enlarged, there is a tendency toward deafness and diminished reflexes, lethargy, loss of memory, fatigue is present, speech is slow as are all motor functions. At times, hallucinations may occur. Rarely does the patient become agitated, which is misleading and often results in a wrong diagnosis. The treatment is organotherapy, thyroid extract being given in small doses, increasing the dose until the patient's tolerance is reached. Thyroid extract is usually given. Thyroxin has been used but it seems to be an impractical procedure since it is given hypodermically. The reaction obtained when the point of tolerance has been reached is similar to that of hyperthyroidism. The patient should be carefully checked for reaction and the dose decreased when such occurs.

All treatment with thyroid extract or thyroxin must be carefully controlled because of the marked potency of the drugs and the rather severe mental and nervous reactions which may occur, in addition to the physical symptoms of thyroid toxemia. Certain cases of fairly marked hypothyroidism seem to have a very limited tolerance toward thyroxin and even small doses may cause a sudden and

marked increase in the metabolism with concomitant nervous symptoms.

The thyroid gland has been of marked interest to psychiatrists because the mental symptoms resulting so closely resemble the manic phase of manic depressive psychosis and the agitated depressive group. Some authorities still contend that it is an important factor in the production of these psychoses and that they are actually organic or toxic in character. It is true the basal metabolic rate is raised in both cases. In one due to a physical over-oxidation and in the other possibly due to the over-activity caused by the psychic reaction of the individual.

Whether the adrenals play an important part in the actual production of psychosis is extremely problematical. We know that they play an important psychological part due to the fact that adrenalin increases the blood pressure, releases the sugar from the liver and thereby temporarily increases the energy and strength of the organism. This secretion, under the stress of fear or abnormal excitement, acts as a protective agent to the individual giving him more strength to combat danger. The adrenals are probably overstimulated as a result of the fears which accompany insanity rather than as a causative factor. There is still considerable work to be done in this field.

The thyroid, as far as we know at the present time, is the main organ of internal secretion which can cause an actual insanity without any environmental factors. Whether the depression of menopause can be blamed on to the thyroid or not is questionable. However, there seems to be no marked ovarian disturbances in the simple depression and since the involutional melancholias so closely resemble depression—they are considered by some authorities as types of manic depressive insanity. Should it be considered that glandular dysfunction is the important etiological factor, it would seem more probable that the disease is caused by a secondary reaction on the thyroid of the irregular ovarian secretion. The other glandular dysfunctions have their effect on the psyche because of the physical inferiority which results—due to the hyper and hypo secretions. This physical inferiority results in the individual attempting to estab-

lish himself through some means often anti-social in character. It is more of a reactional type of behavior, purely psychological in character, but definitely based on a physical difficulty.

Infantilism and gigantism, as well as abnormal development of sexual characteristics, both primary and secondary, are the main factors which will cause these reactional types of behavior. Infantilism may be both gonadal or non-gonadal in character. Endocrine infantilism has been attributed to all of the glands but is mainly caused by the thyroid or pituitary. It is characterized by delay in the epiphyseal closure of the bones, and delayed closing of the fontanels and accompanied by a general slowing of body growth.

Brissands' thyroid infantilism is similar to myxedema, showing much the same symptoms. The delayed growth due to cretinism has been previously discussed. It is interesting to note that of all types of dwarfism or infantilism—only those which can be attributed to the thyroid show primarily mental delay of growth or behavior maladjustment. Those attributed to the other glands show apparently normal mental development with the psychic problems resulting at an age when the dissimilarity between those suffering from the condition and the public at large can readily be recognized and when the individual himself is able to appreciate the difference which exists.

The Levi Lorain type depends upon the deficiency of the anterior lobe and is characterized by an absence of obesity, with the body being on a small scale. With the possibility that the anterior lobe of the pituitary secretes another hormone, we find another type characterized by obesity and sexual hypoplasia. Some authorities consider that this type is not pituitary in character but that adiposo-genitalia dystrophy is due to a non-endocrine condition which affects the endocrines rather than being caused by them. The condition must be differentiated from dwarfism and achondroplasia. In true dwarfism there are two types; one in which the infant is small at birth and the second in which the growth stops later in life. They are characterized by apparently normal physical development except in height and by an undisturbed men-

tality. Achondroplasia is due to a growth disturbance of the cartilage tissue. The rachitic type, due to nutritional factors, is not as commonly seen as formerly. Over-secretion of the pituitary of the anterior lobe causes a type of gigantism known as acromegaly with a marked overgrowth of the bony structure, particularly noted in the jaws or the maxilla. This is more marked if the condition is present at birth and in infancy, but may be caused later by a disease of the pituitary, particularly tumors, in which case symptoms of pressure with optic atrophy quickly results. The posterior portion when underfunctioning causes a type of fatty development characterized by deposits about the girdle, hips, postportion of the neck and the mammae.

—It is considered that the pituitary plays an important activating role on the gonads and undersecretion not only causes psychic trauma due to abnormal physical development but possibly a more marked trauma due to sexual inferiority. The dysfunctions, theoretically, should react to various pituitary extracts, antuitrin being the one which is most hopeful at present. However, the results in pituitary medication to date have been far from successful. The best results obtained are from combined treatment of pituitary extract, anterior or posterior lobe as the condition indicates—and thyroid. This must be combined with dietary and hygienic treatment. However, since the treatment gives such outstandingly poor results, it is of extreme importance that psychic therapy be combined with treatment in order that later mental difficulty will not occur from the resulting marked feelings of inferiority. It should be instituted with the cooperation of the family as early as the child is able to grasp the situation and as soon as there is any tendency for the child to withdraw or to overact in an attempt to establish himself.

Eunuchoidism, with its tall, thin type of individual, becoming obese after the third decade, with its underdevelopment of the gonads, produces its interest to psychiatry due to the disturbances caused by attempt to make a social adjustment. Primarily, hypogonadism does not produce obesity until the third decade.

Ovarian deficiency produces mental symp-

toms of "hyperemotionalism, self-pity and unjust criticism," these all being based on the psychic element rather than on the physical, with easy fatigability and weakness which may well be physical in character but are probably psychic. Pubertus praecox caused by hyperplasia of the gonad, pineal gland, and the adrenal cortex is extremely rare and seldom met with. If caused by tumorous growths, surgical procedure causes a rapid return to normal. These must not be confused with early menstrual appearance which occurs in some individuals without any marked change to the external organs.

Whether or not hypogonadism plays a part in homosexuality is extremely problematical, and if it does, it would be only true in the rare cases. The same may be considered true of structural bisexuality. It is true that there are rare cases where the individual is truly bisexual but these cases are so seldom seen that they can be almost discarded from practical consideration. True homosexuals do show at times some signs of hypofunction of the gonad such as a tendency for the body configuration to attain a neutral type and for the pubic hair to assume either the masculine or feminine outline and also a change in the voice. Here again, however, we find that the cases showing these characteristics are often outnumbered by those in which such do not occur and the active homosexuality occurring in all cases may be due to the fact that the individual is inherently heterosexual but because of the physical development assumes homosexual activities. It is now commonly thought to be based on a purely psychic disturbance with the emotional development being stopped at the homosexual stage of the normal development. This, of course, is a psycho-analytical concept and if true should result in a high percentage of cures (at least theoretically), which has not been realized to any extent at present. We are, of course, not considering those homosexual activities which occur in institutions and are purely environmental in character. Another factor which would tend to disprove the glandular etiology of homosexuality is based on the fact that after castration in the normal male—replacement of the gland results, at least temporarily, in the return of libido, feeling of

well being and return of the normal bodily contours. This does not occur when gland transplantation is attempted in the homosexual. Although there are many degrees of mental effects which can occur from the sexual and gonadal underdevelopment based on the degree of the condition and on the type of training which the individual has received and his ability to accept the situation, they are purely psychiatric problems.

The feeding of the ovarian extract, as stated before, has been attempted mainly in the praecox cases and in involutional melancholia—but to date without results. In many cases which have been treated in the Delaware State Hospital, more success has been obtained by the use of theelin.

In closing let me state that approximately 5% of all mental deficiency is caused by glandular irregularities either of the inherent type or due to some infection received in intrauterine life. Glandular treatment of the mother, particularly in the thyroid cases where there is a hypofunctioning—will often prevent the condition from arising in the child. Early thyroid treatment will result in at least a near normal individual, but the treatment must be instituted very early—at least before the second year of life. From a psychiatric viewpoint we find that all deviations from the normal produce mental traumas which result in maladjusted individuals, if not properly treated. This is particularly true in the sexual field, as propagation being one of the strongest instincts in human life, inability to carry on the function results in a marked feeling of inferiority with a compensatory reaction, resulting in all types of abnormal behavior. This abnormal behavior is based on theory that all individuals must feel equal to the group in order to make a satisfactory life adjustment. If they find it impossible to obtain this equality through social methods anti-social methods will be used which may result in many acts against the law. The boy who is different from the crowd because of some glandular bodily deformity broods, draws back, and finally seeks relief from his pent up emotions, by seeking attention from the crowd. Physical deformity in adolescence is well recognized as one of the important etiological factors of juvenile delinquency. Anti-social

habits are thus formed which continue into adult life.

Hypersecretion of certain glands causes a physical and mental unrest forcing the individual to seek new activity and excitement. He may resort to drugs and alcohol as a relief from the abnormal drive.

Should the individual not receive relief through these anti-social acts, he becomes introspective and possibly introverted. Neuroses and psychoses develop readily in individuals who constantly turn their thoughts upon themselves and their own difficulties. They seek compensation and excuses for their own inadequacy. We here see the functional difficulties which may so readily occur.

For years some psychiatrists have been inclined to scout the theory that there is such a thing as functional insanity. Some feel that all these conditions are due to glandular disturbances. It is true that tests have shown an under or oversecretion of glands in psychoses. However, it is difficult to decide which is the cause and the effect. The delicate, yet at present, vaguely understood, relation between the emotions, the sympathetic nervous system, and the glands of internal secretions, make it extremely difficult to arrive at any definite conclusion regarding this. Much more work must still be done. Should it be proven that the endocrines play an important part in maladjustments and should we make as rapid strides in the next fifty years in endocrine therapy as we have in the past, the prognoses in insanity will be greatly improved.

Since glandular conditions are often amenable to treatment before the period of puberty, it is essential that the diagnosis be made early and treatment instituted. Examination for abnormalities of the glandular system should be carried on—on all children, even as we examine their eyes and throats for pathology.

A CASE OF HABIT FORMATION

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In treating cases of anti-social habit formation it is necessary that the etiology of the difficulty be carefully studied before successful

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therapy can be instituted. Cases may be caused by imitation, may be due to a continuation of processes based on some physical difficulty, based on nervous irritability or may be due to some more complicated psychic situation, such as identification with a parent or due to an attention-gaining mechanism or to a protest against certain factors in an adverse environmental situation. The case to be discussed was studied carefully and all types of treatment instituted with complete failure based on the impossibility of changing the environmental situation, the difficulty apparently being with the mother whom it was impossible to re-educate as to the proper handling of the child.

Jane was first referred to the Clinic on Sept. 21, 1934, when eight years, nine months of age, on the complaint of masturbation and sexual activities with men in the community. At that time she was in 2A grade, doing poor work. The parents professed themselves to be at a loss as how to correct her behavior. The maternal grandfather who was of Irish descent, although very strict in his dealings with his children, was accused of being sexually irregular with the mother of the child and her aunt.

The maternal grandmother died following a period of depression. One of the maternal sisters was illegitimately pregnant, one brother was reported mentally deficient and "just sat around, doing nothing." Another brother was reported as being immoral with farm animals and was also spoken of as "acting queerly."

The family has been known to relief agencies for many years. The paternal grandfather was arrested for "assault with intent to kill" a neighbor with whom there had been a feud for some time. The child, who is the illegitimate daughter of the mother and a man whose name she cannot give, was born on Dec. 25, 1925. The mother leads a very irregular life and is not positive of the parentage of her other children. The child was able to walk at one year and started talking at 1½ years, being only slightly retarded. There were no serious illnesses or operations other than tonsillectomy. At the time of initial examination she was reported as having occasional fits of restlessness and enuresis once in

every two or three weeks. She masturbated frequently and often on the street regardless of spectators. She was reported as having possible sexual experience with men in the community. School attendance was poor because the child was often kept at home to care for the other children. She did not care to play with crowds but chose one or two children. However, she made fairly good contact with those with whom she played.

The mother reports that she first noticed signs of strange behavior in 1933, at which time a man living in the home would frequently take the child to shows and buy her gifts and clothing. The mother felt that the relationship was becoming too intimate and decided to move. On telling the child of her decision she burst into tears and readily agreed. The parents became suspicious and took her to the hospital clinic for examination for possible assault which proved to be negative. Since this time she is reported as having an increased interest in sex and of making advances to men in the neighborhood; also repeated exhibitions of masturbation. She would stay away from home for hours and would give no explanation as to what she had done or where she had been. She has had occasional periods of depression and nervousness during which she would not want to be bothered, has been "often sassy" and discipline has been difficult.

The environment has been extremely poor and the family has been dependent a great part of the time. The parents often followed her when she would leave the home and questioned her closely and obviously. At this time the child appeared to be talkative, often took the initiative, and was somewhat on the defensive. On being told that she might be taken away from the parents she told the worker that she did not want to go because she "would miss mom" and that she wanted to stay at home.

The parents were very cooperative and anxious to have something done since they were unable to cope with the situation. An interview with the mother proved her to be a moron in mentality, entirely amoral in her attitudes, discussing her irregularities without hesitation. She seemed to be somewhat pleased with her mode of life excusing all of

her sexual irregularities on the basis of being "kind-hearted." She discussed sexual problems freely with the child, discussed the irregularities of her neighbors and at times sent the child to protect another woman who was afraid to stay alone because of fear that some man might attack her.

A physical examination shows the child to be negative except for slightly exaggerated reflexes.

At the first interview the child was found to be very friendly and spontaneous, holding a continuous conversation. She was extremely sophisticated for her age and showed evidence of having complete sexual information obtained from her mother. She admitted heterosexual attack at one time but denied other activities but was concerned after the physical examination for fear that some of her activities might be discovered. In spite of her denial there were strong suspicions that she had been sexually active. At this time it was interesting to note that these activities were not carried on in the school during which time she was completely occupied. General treatment was instituted to occupy her time more thoroughly outside of school hours. She reacted well to praise and her alertness made it possible to interest her in other activities readily. It was not felt that the child was receiving any physical satisfaction from her sexual behavior. The prognosis in the case was guarded because of her general attitude and sophistication, as well as the mother's inability to handle the situation intelligently. The hopeful features in the case were that the girl did not carry on her activities when her time was occupied and that she did not have a definite realization of the anti-social character of her behavior. She was interviewed at monthly intervals and showed rather marked improvement. However, several weeks later she said she had discontinued her sexual actions because of the fear of becoming pregnant (probably a remark of her mother's), still maintaining an amoral attitude. She improved markedly in her behavior and it was felt she was not an inherent delinquent. Rather she developed a reaction to the sexual act, feeling it was "bad." Because of this feeling it was felt that wise sexual education was necessary in the near future. As she con-

tinued coming to the hospital it was noticed that she was attending clinic for the attention she was receiving which was considered rather detrimental. She showed good imitative trends and showed a greater interest in her school work. She was becoming less sophisticated in her attitudes and more interested in playing. About this time the enuresis problem became severe and she suffered from enuresis nightly, this following her change in attitude toward sexual activities. The enuresis problem was attacked as a special habit but as it started decreasing the child began developing many neurotic tendencies, being entirely preoccupied with her own physical condition. The child had been on treatment at the clinic for approximately one year at this time, and although her behavior was not as anti-social she showed the tendency to substitute for her former habits. She now showed periods when she was decidedly depressed, dejected and preoccupied. She again described her physical symptoms with a high degree of imagination, the notation at this time showing that her "enuresis had continued improving." She becomes extremely interested in the hospital and insanity, discussed her father's condition (father being ill) at the time saying "someone has put a spell on him." "Some people say they are crazy; they are not; they are just out of their head; just like something blue in front of them; they don't know what they are doing." The interest in insanity was rapidly dropped and again she turned to the physical condition of herself and her family.

During the last interview at the clinic, the enuresis had practically stopped but the child was vomiting after each meal. It is interesting to note this started during the mother's pregnancy while she was suffering in the same manner. Between the enuresis problem and the neurotic problem the child suffered from a period when she indulged in begging to a rather marked degree, a condition which has improved.

The child, early in life, subject to unwise training on the part of the mother, was given sexual information in a crude and unwise manner, since the father often taunted the mother with the illegitimacy of the girl and it is entirely possible that she was acquainted

with her own status. The method of disciplining was beating and threatening. She was more intelligent than her parents (I. Q. dull normal), very fond of her mother, and somewhat defensive in her attitudes. As soon as interest was dropped in one type of behavior, she would stop whatever habit from which she was suffering at the time and substitute another for it. The break was a gradual lessening of the one as the second developed. Although her behavior became more social in character, it still is the type which incapacitates the child to a great extent. The mother paid excessive attention to her difficulties and has continued to do so up to the present time. She has lived in an amoral atmosphere and has never attained a social attitude toward sex. With the continuance of the attitude, it has finally been determined that it is essential the child be removed from the home.

Throughout the entire study, she was inclined to lie unless she felt that truth would bring her more attention. The clinic interviews have proved to be detrimental in that her habits are partly maintained in an attempt to hold the attention of the examiner. In spite of the fact that very little comment was made upon them; she would talk at length about her various symptoms.

Masturbation in children is of such frequent occurrence that some authorities have considered a physiological type. It is a phase of the individual's development and rapidly disappears as the child grows older. In an atmosphere of amorality, with unwise correcting of the habit it becomes pernicious in character. This child was raised in an oversexed atmosphere. Punishment was severe and she was constantly reminded that she was going to be "bad" like her aunt who had an illegitimate child. Possibly there was some reaction on the mother's part in spite of her deficiency, towards the patient's own illegitimacy. The father was cruel at times to the patient. He had married the mother when she was pregnant. The patient was laboring under an insecure environmental setting. As the oldest in the family she was forced to assume duties far beyond her abilities, at times doing the washing and ironing. Her anti-social behavior secured for her not only the attention

of the family group but other people as well. The development of what is apt to terminate in a neurosis is well demonstrated. She reacted well to treatment of each individual habit but quickly substituted others. Enuresis is often a guilt substitute for masturbation since it is less offensive and more social. As the sexual problem disappeared and the enuretic problem became more severe the mother sought explanation through physical means. She stated that the child was to be operated upon for a "ruptured bladder." Her interest was centered about the possibility of the child receiving surgical care. As the child's mind became focused upon her physical sensations, the enuresis stopped.

Whether the vomiting which now exists is imitative of the mother's condition or not has not as yet been determined, although the possibility is strongly considered. The mother is entirely unable to cope with the situation, since she herself is inclined to magnify the child's symptoms thus aggravating them. Since the child is now at a stage where she is about to develop into "a chronic invalid" it had been considered essential to remove her from the home in an attempt to prevent a permanent pattern of behavior which will be non-compatible with a well-adjusted life.

It is essential that cases of this type be intensively attacked therapeutically in order that permanent patterns will not develop. All agencies and schools should endeavor to notice these abnormal traits at an early age so that the home situation can be carefully studied and whenever indicated the child can be removed from deleterious influences.

MANIC-DEPRESSIVE PSYCHOSIS: CASES OF DEPRESSION

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Manic-depressive psychosis is one of the great group of functional psychoses and as the name implies is composed of two main types—the manic type and the depressive type, the latter being the subject of this paper with actual cases selected from the files of the Delaware State Hospital. The total of the manic depressive cases in the main hospital

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at the time of the last biennial report was almost exactly ten per cent, more than half of whom were of the depressed type, while in the Psychiatric Observation Clinic, an adjunct of the Delaware State Hospital, the manic depressive psychoses for the same period of time constituted the third largest group of admissions to the clinic and of these more than three-fourths belonged to the depressed type. Therefore, it will be readily seen that this type of mental illness is of considerable importance. Also, it is a well-known fact that there are many cases which never see the inside of a hospital; they either recover spontaneously, are maintained and protected by relatives, or become suicides.

The principal mental symptoms of the depressed type are psychic inhibition with a marked weakening of attention and sluggishness in the association of ideas, lucidity is present but perceptions are incomplete and often inaccurate; things appear unrecognizable and strange, the mood is gloomy and the patient is apathetic, indifferent, and contrary to his normal self shows little affection. The lack of will power is marked, the simplest action often requiring tremendous effort. Indecision and uncertainty are pronounced and conversation is often unsatisfactory because the effort to respond adequately is beyond him. The delusions usually present are depressive in character, and take the forms of fear of punishment, self-accusation, fear of ruin, and various hypochondriacal ideas such as the idea that they have contracted a terrible disease. At times the delusions are persecutory in type and will, in the course of time, become somewhat systematized. Hallucinations and illusions are found at times, but not as frequently as in other psychoses. If the psychic inhibition or paralysis becomes deep enough the patient may actually become stuporous.

The physical findings in general may be summarized as disturbances of circulation with cold extremities, muffled heart sounds and usually slow pulse of diminished tension; loss of weight due to digestive disturbances; sleep is disturbed and not refreshing; there is often complaint of vague body pains and headaches; and cutaneous sensibility is frequently diminished. It might be added that

anorexia and constipation go hand in hand and can usually be expected.

The course of a depressive psychosis is often irregular, there may be remissions when the patient will be practically normal for a time and then there may be exacerbations with marked but usually transitory agitation and anxiety. This type of patient as might be expected frequently becomes suicidal and then requires constant watchfulness even after apparent recovery.

The summarized case histories that follow are illustrative of the diversity of causes and variety of symptoms found.

H. C. A 55-year-old white male for many years a street railway employee. He put his life's savings in a small farm, but through lack of management and being unskilled in farm work lost it later. For three years before admission he was the constant attendant of his wife who was dying with cancer. After her death, he became very depressed and worried and believed that he had cancers all over himself and declared that he "felt them burning." He began talking to himself and prayed for mercy. He said he had been contaminated by his wife and was being repaid for his wrongdoing. Physically there was nothing of significance except bilateral inguinal hernia. His course in the hospital was uneventful. It was at first necessary to employ considerable psycho-therapy, but as time marched on it became less and less necessary. He was early started in the occupational therapy shop and at first took but little interest until he was tried at repairing and upholstering furniture. He took a liking to this work and has become somewhat of an expert at it. As his interest in his work increased his hypochondriacal delusions decreased and today the patient has virtually recovered.

W. C. F. A 44-year-old white railway employee, who during the depression was put on the "extra list" working only occasionally. His enforced idleness and consequent worry about his financial condition gradually resulted in a depression which was enhanced by acquiring a "cold" causing him to be laid up in the house for several days. After the "cold" cleared up the patient remained very listless and apathetic. He was heard to re-

mark that "death was the only way out for him" and often expressed a desire to die. He became very despondent over the loss of work and talked excessively on this one subject, at times becoming incoherent. He finally made an attempt to strangle his wife. His course in the hospital has been marked by periods of depression during which he has gradually acquired the idea that there is something seriously wrong with him physically and that it is centered in his abdomen, belching and eructations of gas forming the basis for this idea. A small right inguinal hernia was corrected and this was used as a lever to shake his fixed idea of abdominal disease. It worked for a time and he became more cheerful and ate better. With some indiscretions of his diet came an occasional return of gaseous eructations which of course he at once connected with his previous condition and he declared that he knew the doctors were all wrong; that in despite of the x-ray and clinical evidence to the contrary, there is some very serious disease in his abdomen. However, not all of the ground gained has been lost as following recovery from his herniotomy he was started to work in the ward dining room and still works there. Psycho-therapy, hydro-therapy—such as stimulating sprays, and a special diet have all aided in keeping this man from sinking into a deep depression. It is felt that some improvement is slowly taking place as he rarely complains of his abdomen any more and is more sociable and cheerful than before.

J. K. A white male, 58 years of age who had held the same position for 30 years with a few interruptions. In this case we have a history of repeated attacks of depression, the first occurring in 1922 and lasting eight months; he came home one day from work and complained of a headache following which he became despondent. In 1927 he again had a depressive attack and wanted to commit suicide by swallowing iodine; this lasted five months. In the spring of 1929, he suffered another period of melancholy lasting three months. In 1932 he again became worried and depressed, threatened his own life as well as his wife's; but after 6 months' hospitalization made an apparent recovery. He was re-committed again in the fall of 1934. It was stated that he was very irritable about the

house and began quarreling with his wife the minute he came in the house from work. Apparently in this case domestic troubles were the underlying cause of the patient's repeated attacks of depression. An unsympathetic environment with family strife combined to prevent a permanent recovery. It might well be remarked here that often the psychiatrist finds it necessary to educate and enlighten the patient's family in the best interests of the patient's future welfare. This man's I. Q. was only 69, so he was a more difficult subject to work with because of his limited intelligence. He has now been home nearly six months on parole, and the latest reports are that he continues improved.

J. C. A white male 64 years of age who has been a patient for over 40 years entering the hospital in 1895. In the history of the case, the first major emotional strain was apparently occasioned by his mother's remarriage which both he and his brother opposed, both leaving home afterwards and going to California. Apparently while working in a sawmill there, he was struck on the head and rendered unconscious for several hours by a piece of timber. He apparently recovered sufficiently to go about again, but a few months afterwards developed an abscess of the right ear. Following this accident and abscess, he was noted as becoming depressed at times and appeared to lose interest in the sports and amusements he used to engage in, becoming rather indifferent and apathetic, at times he was irritable and there was a tendency towards violence. He returned to his mother's home in Delaware; but was not very welcome, which certainly did not tend to alleviate his mental condition. His course in the hospital has been rather uneventful and marked by infrequent outbursts of irritability. He is usually a very silent, reticent, and somewhat a social individual, coherent and relevant; he eats and sleeps well. He has become a very good ward worker, but cannot stand any interruption or interference with his work. Physically there is very little wrong with the patient except a moderate degree of generalized arterio-sclerosis which is to be expected at his age. It is felt that the precipitating factors in this patient's depres-

sion were his mother's second marriage plus the accident and ear abscess which rendered him unable to work for some time. The treatment of such an old established case as this one is largely conservative. Perhaps forty years ago if they had had the facilities and the present day knowledge of mental therapy, this man would have been restored to a normal life instead of being a lifetime ward of the state.

S. S. A white male of 54 years with a psychopathic personality. An artist by profession and a veteran of the Spanish-American War. He receives a small monthly pension. He had been working on a small invention and after its completion he started to worry because he did not have the money to promote it properly. Finally he resorted to alcohol as a sureease to his worries. He acquired the idea that he was being punished for his sins and imagined that he was dead and in eternal torment. He claimed he could not breathe and declared that if his throat was cut he would feel better. He developed an anxious, agitated state, became mildly self-condemnatory and began hearing the voices of women. His course here was punctuated by many threats of reprisal if he were not discharged at once. It was necessary to force feed him on several occasions and he at times exhibited persecutory ideas. After much psycho-therapy with a moderate amount of occupational therapy and continuous tub hydro-therapy, he became more collected and calm, cheerful and soeiable. He was finally paroled as improved fourteen weeks after admission.

C. S. A 61-year-old white female admitted two years ago with a history of a reactive depression following the death of her husband and subsequently the loss of her heavily-mortgaged home about one year before admission. Although her two sons provided for her she eried almost continually and bemoaned the fact that she had no home. Finally she declared she wished that she could die. She developed a pain in the back of her head and declared she was being punished because she had been wicked, although as a matter of fact she had led an exemplary life. She spoke of the devil being in her room and trying to get at her. She was very restless, un-

able to sleep, and refused food and medicine. She became self-condemnatory and exhibited a decided religious trend. The principal treatment in this case has been psychiatric interviews, occupational therapy and the forcing of nourishment and proper elimination. She has improved to the extent that she seldom talks of her troubles spontaneously any more and keeps busy helping with work about the ward; but if the subject of her depression is touched upon she at once shows agitation, self-accusation and apprehension for her future.

H. R. A young white female twenty-eight years of age, was first admitted August 25, 1931. At that time she was excited, noisy, and talked ineessantly and exhibited a marked flight of ideas, speech was irrelevant, and she was extremely exalted and restless. After a few weeks she became quiet, slightly depressed, and irritable at times. Was paroled as improved in May 1932. The diagnosis at that time was manic type of manic depressive psychosis. Her condition remained good for many months and she seemed perfectly normal. In November 1934 the first symptoms of a return of her mental illness were noted. She made her home with her mother-in-law because she seemed unable to withstand the strain of housework and had no initiative in planning her routine depending entirely upon the mother-in-law for advice as to the household plans. She had a slight fall at this time following which she complained of a terrible baek pain. She was thoroughly examined and had x-rays of her spine. No sign of injury was found and it was believed that her complaints were imaginary. From this time on she appeared depressed and everything she did required a great effort. Things began to look peculiar to her and she conceived the idea that she had no friends. On several occasions she spoke of suicide but made no attempts. Was re-admitted — March 1935, and diagnosis changed to depressive type of manic depressive psychosis.

She appeared to be very unstable emotionally crying on very little provocation. She complained of feeling tired and worn out all the time and of having no ambition. Complained of cruel treatment by her husband and

also of the unpleasant attitude of husband's relatives. Her condition for the first six months showed much fluctuation; appeared cheerful one day and then exhibited symptoms of a marked depression for several days. She then began to exhibit signs of improvement being more responsive to psycho-therapy and exhibited some insight. She was paroled in October 1935 and went to live with her husband. Apparently marital life was not congenial. The husband complained of the patient's poor housekeeping and the patient complained of the husband's cruelty. In March 1936 the patient returned to the hospital. She has appeared slightly depressed since her return but on the whole has been very sociable and exhibited at least a superficial cheerfulness although any lengthy questioning brings out depressive trends. It is believed that in this case a re-arrangement of her marital life will, of necessity, be essential before a permanent improvement can be expected.

E. H. A white female aged fifty was first brought to the hospital in September 1931. At the time of admission it was said that she had been very nervous for about a year; that three or four months before admission she had intermittent headaches and two months before admission headaches became more severe. The patient became frightened and thought that a spell had been put upon her to get her out of the way. She wanted her husband with her constantly.

After admission she admitted that she was hallucinated in the auditory sphere hearing imaginary voices which told her to do things differently; also that things looked peculiar to her. The hallucinations apparently left her about three days after admission. She worried very much over her condition and appeared to be mildly depressed much of the time and would sit for hours and cry. Continued to complain of headaches which were apparently of psychogenic origin. She appeared considerably improved two months after admission and as she had good insight was paroled home in December 1931.

She was returned to the hospital in April 1933 because it was stated that she was becoming very noisy, profane, and threatening to kill her husband and child. On her return

she was quite tearful, said she smelled blood at times and had a slight desire to drink blood. She admits that she hears voices occasionally, is slightly self-condemnatory, inclined to be irritable, and is evasive when questioned. She has made a satisfactory ward adjustment and gets along fairly well with other patients. Works in the occupational therapy department and eats and sleeps well.

In this case it appears that not a great deal of headway has as yet been made in effecting a permanent improvement. It is apparently one of those cases in which the patient gives only partial cooperation and does not freely and willingly open her mind to the psychiatrist. She has a marked tendency to parry questions and to verbally spar with the examiner. It remains to be seen whether by some means the wall of suspicion she has built can be penetrated and her full confidence be secured.

In conclusion this much can be said as to the prognosis in depressive psychosis that it is always favorable for recovery from the attack except in the presence of grave somatic complaints. The duration varies within wide limits of from several months to years. Physical improvement in the patient is usually a favorable sign indicating the approach of recovery. As can be inferred from the case histories given here there is frequently a tendency for manic depressive psychosis to recur which is but natural as one of the principal features of the etiology appears to be a constitutional predisposition.

PERSONAL INADEQUACY RESEMBLING DEMENTIA PRAECOX: A CASE REPORT

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A single interview reveals only a very thin cross section of the patient's life. By the question-answer method some conclusions may be reached about the effects of certain experiences, constructed retrospectively in the course of investigation. The interview serves as an introduction to the picture. This first impression constitutes the apparent symptom

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complex. It is merely a surface representation, comparable to the physical sign, fever or tachycardia, indicating some underlying disorder. Just as fever may be a symptom in many diseases, so the same abnormal trait or trend may be common to many mental disturbances.

A case report is here presented in some descriptive detail about a middle-aged man who is facing a grave personal problem with little anxiety. The mental condition is formulated from a review of the man's life experiences, family history, findings on psychiatric interview and special psychological studies.

Since the clinical symptoms, as elaborated in the psychiatric interview, are being emphasized, a departure will be made from the standard procedure of case presentation. First, the problem and the interview will be described. Then the life history will be given, including the story of home life, intimate problems and community interests. In this manner a relationship can be more closely followed between the present situation and the man's past experiences.

The patient was referred to the Mental Hygiene Clinic for complete study, preliminary to placement as a dependent. He was considered queer, but harmless and even tempered. Since the death of his mother, he has become a problem for supervision because none of his relatives are willing to care for him.

On entering the office the man walks stiffly and jerkily with a general appearance of restraint and humility. After he takes his seat, he remains motionless and maintains the same posture for a long time. There is no spontaneity in speech or action. He has no complaints.

His speech is softly toned but broken and halting. There is a conspicuous scarcity of action words in his answers. Samples of his talk are given as follows, in reply to questions:

When asked about his health, he says, "Sometimes pretty good—I had something the matter with me—Kind of ways—Good bit of the time—Never felt very natural a good bit of the time—I don't know that I have suffered so much pain

that amount of time as I remember of."

When asked if he ever married, he says, "I never was married—I did not see very much to turn that way—Just went on—Did not have much turn that way."

When asked about his schooling, he says, "It was not a graded school, but I learned up to the eighth grade. I was put higher than I learned. Did not learn enough to be put up that high."

When asked what he plans to do, he says, "Might not get it—Something of an education and might keep the room and take care of the money and do something. If I wanted, if later, I would not get much somehow."

The man understands at once the meaning of all questions. He is slow in detecting finer implications. He is alert to change in social attitudes, but is only superficially impressed. In conversation he makes many repetitions, uses the same words and rhetorical forms, and invariably fails to complete his thoughts, dropping each sentence weakly with some irrelevant phrase. He has no serious worries. His only concern at this time centers about where he is going to live without causing anybody any inconvenience. He has no ambitions or plans. Practically anything suits him. He displays no initiative or curiosity. He is not resistant, but rather is reluctant to make changes and to meet new people.

In the sensorium he is quite capable. He is able to recite the principal events of his personal history. He is good in his powers of retention and immediate recall. In calculation he is able to make consecutive subtractions of seven from one hundred without a mistake. He has a good grasp of general information.

He realizes that he is different from other persons. He has some capacities for self-appraisal and possesses insight. However, he is resigned to his failings and makes no effort to find excuses for them.

Psychological examination was given as follows:

Stanford-Binet Test; chronological age, 47 years; mental age, 12 years, 9 months; intelligence quotient, 80.

Arthur Performance Scale; chronological age, 47 years; mental age, 7 years; intelligence quotient, 43.

There is a very marked discrepancy between the findings of the Stanford-Binet and those of the Arthur Performance Scale. The former rates him as of dull normal intelligence. Scattering is slightly greater than normal. Vocabulary is passed above the mental age. His two most outstanding failures on the test are the digit memory span and reading memory at the ten-year level; these two failures are suggestive of memory difficulty, that is, with respect to immediate memory. On the Arthur Performance Test, the man's reactions were uniformly low, except for one sub-test, the Mare and Foal, which he passed at the thirteen-year level. All other sub-tests were passed at the seven-year level or below. The Casuist Form Board was failed the most seriously, as not a single hole was correctly filled in the entire five minutes allotted to the test. It may possibly be of significance that the Arthur Performance Test followed the Stanford-Binet; fatigue may have had some influence on the low performance score.

Physically the man is well built with pyknic habitus and good muscular development. He has an effeminate voice but masculine features with a square jaw and a rather determined expression. Examination is negative for special system disease.

The personal history revealed that the patient was an only child of neuropathic stock. Mother was known to be pathologically suggestible and easily imposed upon. Father was quiet and withdrawn in temperament. His uncle was practically a recluse.

Antenatal influences were not favorable. There were signs of puerperal toxemia. Mother had convulsions at birth of child and delivery was instrumental.

The baby developed normally in walking and talking. He was nursed on the bottle for three years because "the mother was a good old soul and wanted to keep him a baby as long as she could." He seemed to be bright and active, but he did not want to play with other children. His father was very solicitous about him and never left him out of his sight.

School progress was uninterrupted from seven to sixteen years, with 8th grade attainment. Mother did not start the boy in school until seven years of age because she did not think that he was grown enough. He had to

be taken to school every morning by his cousin, not that he was afraid, but was so indifferent that he never reached school when he went by himself. He never mixed with other boys at school. He spent recess time at his desk. He was "teased," but he never seemed to mind it. He was not retarded in his school work until the last year; even then he was making passing marks. He was taken out of school by his mother because she believed that he was mistreated by other boys.

The patient has always been closely protected at home. He had no playmates and remained most of the time in his father's presence. His father would sit with him several hours at a time and talk companionably about current happenings. He kept the boy informed about affairs of national interest. His uncle, who was a bachelor and a woman hater, lived at the home and influenced the boy in his exclusiveness and in his avoidance of the company of girls. The patient has had no sexual experiences other than nocturnal emissions.

During his entire life the patient was rarely denied anything that he wanted. In fact he was hardly ever given a chance to want anything, as most of his wants were supplied automatically. Each morning his clothes were always laid out for him, his ties and socks were selected and his shoes were polished. In disposition he has always been considerate of others and tender hearted toward animals. He was never known to kill insects. With a fly swatter he would brush away the flies on a table instead of killing them. He was very generous. He often gave his last bit of change to children who had just been taunting him on the street.

As a wage earner the man has been a failure. He never held a job, even at unskilled labor longer than a week. He needed a constant supervision and had to be told each step even with the most simple tasks.

The only signs of self-assertion ever displayed were episodes of screaming at night and pitiful sobbing during the day without known cause. These exhibitions were of late onset and occurred only rarely. He acted queerly on the occasion of his grandmother's death. He jumped up and down in joyful ex-

citement shouting riotously that grandmother was dead. He had loved his grandmother.

Following the death of his mother last week the man showed no visible emotion. He made no remarks to anyone and did not seem sad. He has been noticed to walk around the room as if he were earnestly looking for something, glancing here and there, going over the same grounds repeatedly. When asked what he was looking for he made no reply.

By way of formulation, there is noted here a constitutional predisposition towards seclusiveness in the life patterns of mother, father and uncle. In the perpetuation of this trait, the patient was reared in an overprotected atmosphere as an only child. There was little need for the development of initiative and aggressiveness, as most wishes were satisfied even before they could find expression. Whatever instinctive urge the child might have possessed operated, one might say, in a vacuum and died out early. He became automatic in all of his acts. He suffered no impelling desires. He enjoyed no enthusiasms or anticipations. He was indifferent to praise or insult, and led a vegetative existence. Clinically, the attitudes, mood, general trends and stream of thought resemble the schizophrenic reaction.

In contrast to the schizophrenic state are the following items considered collectively: The patient is responsive and appreciative of social attitudes. He is sensitive to changes in his social situation. He possesses a harmony of mood and action. The set phrases which he utilizes in his speech reflect habit more than mannerism. He has probably always been limited in verbalist ability. There is no change on this score. His inadequacies of speech are no less marked than those of his interests and attitudes. He conducts himself true to hereditary leaning and early training. He is socially adaptable within the limits of his old environment, and he acts in accord with his early acquired patterns of conduct.

A deficiency exists here primarily in the field of volition, the will to do things, resulting in a state of extreme suggestibility, and a sameness of speech and action. Psychogenic factors from early childhood encouraged the development of a schizophrenic behavior pattern, but not a schizophrenic distortion in the

personality itself. The case is presented as one of situational maladjustment in a temperamentally inadequate person with diminished exercise of the will.

DIFFICULTIES IN DIFFERENTIAL DIAGNOSIS OF MANIC-DEPRESSIVE PSYCHOSIS AND SCHIZOPHRENIA

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In general medicine the developments of science are daily making the problems of diagnosis more simple, the final result more mathematically exact. To the psychiatrist who must deal with those two great plagues of the mind, manic-depressive psychosis and schizophrenia, those artificial aids of science hold out little promise. He must continue to depend upon his observation of the patient's behavior.

Cases of schizophrenia and of the various phases of manic-depressive psychosis fitting the text-book descriptions are frequently seen and are promptly classified. It is interesting to note, however, the frequency with which doubts arise in the mind of the physician, and how often argument arises during diagnostic conferences, on the differentiation between those two groups of psychoses. It would appear paradoxical that such difficulty of differentiation should be encountered, because we are taught that the two conditions are in many respects almost exact opposites. In typical cases this is true, but such a large percentage of cases is not typical and such strange variations and curious combinations of symptoms are seen, that even after years of study cases may not be definitely classified; in fact, time may bring confusion where the diagnosis originally seemed obvious. It is my purpose to illustrate some of the points which so often contribute to the uncertainty of our efforts to distinguish between these two important conditions.

In considering etiology, we find that age of onset while of some aid in separating these two groups from other psychoses, does not help to distinguish them from one another. Neither does a consideration of precipitating situation assist us. The etiological factor of prime significance is the personality type. The

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introverted, "shut-in" personality, always on guard, limiting itself to solitary pursuits, never establishing intimate social contacts, exhibiting indifference or aversion toward the opposite sex; that, say the text-books, is the personality which in adversity develops into schizophrenia, and in the majority of cases that is true.

Consider, however, the case of a girl twenty years of age, a high school graduate who led her class, then completed a twelve-month business course in eight months, and in addition was good at music. She was reserved, making no effort to form friendships. She showed no interest in recreation. She was indifferent toward the boys of her acquaintance. This girl became concerned over her work, developed a profound depression, followed by a manic period of several weeks' duration, finally recovered and has successfully held a position of responsibility for the past three years.

This was certainly a typical example of schizoid personality, who developed a manic-depressive psychosis, recovered, and still exhibits the original schizoid personality traits.

On the other hand, we expect the moody, emotional personality, in case of a break, to develop a manic-depressive psychosis, since depression and mania are but exaggerations of the characteristic tendencies of the moody personality. But to mention one of many such cases: A woman committed to the State Hospital at the age of thirty-two years exhibited the characteristic behavior of catatonic dementia praecox and has continued to show a typical picture of that condition for the past five years. We find that previous to the onset of her mental illness she was of the vivacious type, extremely lively, sociable, popular with young people, particularly of the opposite sex. This is distinctly not the sort of personality we would expect to develop a schizophrenic condition, yet there are many similar cases.

The course of the illness in typical cases gives a clue to differentiation, and a history of repeated psychotic attacks, with remissions, is always in favor of manic-depressive psychosis. Again the rule is not rigid. To illustrate I take the case of a woman now thirty-nine years of age, of typically introverted personality, who at nineteen years became

restless and sleepless, believed her mother was dead, and finally went into a stupor of several months' duration during which it was difficult to feed her. She showed slow improvement until the stimulus of the birth of a baby sister brought about what appeared to the relatives to be almost complete recovery. It was merely noted that there was a slight residual of "nervousness."

Nine years later, following an attempt to hold a clerical position, there was a second attack, characterized by over-talkativeness, profanity, refusal to wear clothing, and disturbance of sleep habits. After a year there was again improvement, but it is stated that she remained peculiar and eccentric, and assumed an excessively strong maternal attitude toward her younger sister. The final break occurred two years ago when the sister developed an acute manic attack necessitating removal to the State Hospital. She grew violent and assaultive, wandered about looking for her sister, whom she often declared to be dead. She was seen dancing on the street and laughing to herself. She stated that her whole family was dead, but exhibited no appropriate emotional response. There were several periods of catatonic-like rigidity. This schizophrenic behavior pattern has persisted for two years and we feel fairly safe in classifying the case as schizophrenia. The history of recurrent attacks is suggestive of manic-depressive psychosis, but we note that there was never a complete return to normal. We believe, therefore, that there was never complete recovery, but merely a remission of the more obvious symptoms. The series of attacks and remissions was, however, sufficient basis for hesitancy in applying a diagnosis.

As to psychotic manifestations, the sources of confusion are innumerable. There is scarcely any sign found in schizophrenia which cannot also be found in either the manic or depressive phase of manic-depressive psychosis, and most manic or depressive manifestations may occur or be simulated in schizophrenia.

The depressive phase of manic-depressive psychosis presents particular difficulty. It might be supposed that depression would always be easily recognized, but this is not so. Severe depression may show absolutely no evi-

dence of emotion, only complete indifference. How are we to distinguish this from the true apathy of schizophrenia, simple type? The two may present practically identical pictures. Catatonia is responsible for many errors in differentiation. In spite of being frequently reminded that catatonia is not peculiar to schizophrenia, nevertheless the psychiatrist feels influenced in spite of himself, when observing catatonic manifestations, to consider schizophrenia above any other possibility.

As a matter of fact, catatonic manifestations are surprisingly frequent in depressive phases of manic-depressive psychosis, as in the case of a twenty-year-old negro girl, of unusual educational and cultural advantages, who shortly after giving birth to an illegitimate child, developed a profound depression with severe psychomotor retardation. During observation in the hospital there were periods of stupor, with characteristic catatonic rigidity. Typical depression, however, was the predominant characteristic of the psychosis, and recovery after three months appeared to be complete.

On the other hand, an attack of catatonic excitement may, to the observer unacquainted with the entire course of the psychosis, resemble acute mania. The manifestations of hebephrenia may bear a certain resemblance to mania.

Superficial evidence of emotion must not be allowed to prejudice a diagnosis of schizophrenia. A young female schizophrenic is often seen to shed tears freely with no other evidence of emotion, and in the midst of her tears will respond to conversational advances with a vacant, silly smile. Another young woman, typically schizophrenic in most respects, turns on a flood of tears, obviously to gain sympathy, during her mother's visits, never at any other time.

A psychosis may resemble schizophrenia during one "phase," manic-depressive during another. A young girl of distinctly introverted personality type, after a brief preliminary depression developed an undue fixation on introverted sexual interests, with bizarre delusions, blocking and suspiciousness, on the whole fairly typical of schizophrenia. There was a gradual approach to normal, then a change to a typical manic state, with gradual

subsidence and ultimate recovery. A preliminary diagnosis of schizophrenia, supported by most of the evidence up to the time of onset of the manic state, was, upon recovery, changed to manic-depressive psychosis. With such a nice balance of evidence our minds must be kept open to possible future developments.

Where there is a question of differentiation, the fact of recovery is considered by many psychiatrists as a powerful point against schizophrenia. Certainly this should be true whenever the diagnostic findings are at all equally divided. The reluctance among some workers to diagnose as schizophrenia any case that recovers has without doubt added to the already sufficiently sinister reputation of that disease.

In the foregoing I have made no effort to exhaust the field of diagnostic difficulty, but have attempted to show the possibilities of error and doubt.

THE PSYCHIATRIC USES OF INTRA- VENOUS SODIUM AMYTAL

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After the demonstration of the therapeutic effects of barbituric acid derivatives by Fischer and von Mering, in 1903, interest in this group of drugs steadily mounted and many new derivatives were prepared and marketed. The sodium salt of iso-amyl-ethyl barbiturate, later sold under the name of sodium amytal, was first experimentally injected in dogs by Page and Coryllos. They found that general anaesthesia was obtained by an intravenous dosage of 40-50 milligrams per kilogram of body weight, and they and other observers noted a fall in blood pressure following its use. Zerkas, McCollum and others investigated its possibilities as an anaesthetic in man. A somewhat smaller dose per kilogram is required in man than in experimental animals. Bleckwenn and his co-workers undertook to establish its possible uses in psychiatry in 1929; with only a few exceptions, the present uses of the drug are all mentioned in Bleckwenn's original report.

Though apparently Bleckwenn was principally concerned with the hypnotic effect of

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the drug at first, he found a peculiar change in the behavior of catatonic patients following its use, entirely aside from its hypnotic effect. Lorenz noted the similarity of these changes to those found by Loevenhart and himself in 1916, while experimenting with respiratory stimulation by sodium cyanide, and those seen later and to a more marked extent when carbon dioxide-oxygen mixtures were used. Investigation has therefore gone forward and has concerned itself both with the uses of the drug as a hypnotic, and with its added effect of producing lucid, approximately normal periods of behavior in certain types.

The pharmacologic action and toxicity of the whole group of barbiturates has been exhaustively studied. Possibly the best detailed account of their action and dangers is that published by Wagner in 1933. He mentions for the more rapidly-acting compounds, the same contra-indications which other observers have consistently reported for this particular derivative: arteriosclerosis, particularly if accompanied by myocardial disease, hypertension and extreme hypotension, and of course, because of the respiratory depressant effect, any respiratory obstruction or pulmonary congestion. The presence of any febrile reaction indicates the need for caution, though it may not be an absolute contra-indication. Though dermatitis or transient respiratory embarrassment may occur, deaths from intravenous injections have been rare, and the question of toxicity is, according to most observers, not so serious here as when small doses are given by mouth over a long period.

In practice, the most important danger is in injecting the drug too rapidly. Bleckwenn's method consisted of having the stomach empty (because of the danger of regurgitation and asphyxiation), and injection of a calculated dose for the body weight, in a five per cent solution and at a rate not exceeding one cubic centimeter per minute. Some workers regularly inject the drug at only half this rate; any material increase in rate over that quoted is followed almost regularly by temporary respiratory difficulty or failure.

The dosage which could be safely given was first placed by the early workers at three grains beyond the amount required to abolish

the corneal reflex; in later reports they specified only one and a half grains more than required to produce this effect. The maximum dose for the average case is generally considered about one gram. Several writers have called attention to the fact that the effective dose is more determined by the type of patient than by body weight. Tolerance develops slowly but does occur. Special caution and smaller doses in involuntal cases in particular, have been advanced. Because of the slowness with which the drug is injected, its maximum effect is readily observed and the dosage regulated by the patient's reaction.

Though the original reports on the use of this drug included its trial in various psychoses, a number of other situations in which it is a useful part of our armamentarium have since appeared.

Convulsive States: The earliest reports of the drug mentioned its effect in abolishing the convulsive state in status epilepticus; this action has become commonplace. Some workers have adjusted the dose to the patient; Thorner used a fixed dosage of seven and one-half grains, and used an additional amount by mouth; he obtained unconsciousness and cessation of seizures in all his cases. A high percentage of success in such cases is obtainable by early use of the drug. Bleckwenn mentioned an epileptic woman whose pregnancy was enabled to go to term by its administration. No evidence is obtainable to indicate that recurrence of convulsions is affected.

Convulsive states due to tetanus, eclampsia and strychnine poisoning have been treated successfully. In the case of strychnine poisoning, synergy with other drugs is advantageous.

Acute Alcoholism: A few reports are available which indicate that alcoholic delirium can sometimes be controlled.

Acute Manic States and Depressions: The drug was first used with the intention of producing a regular cycle of sleep and rest in acutely excited patients. In addition to this, intake of food is definitely easier to maintain. Dameshek and others found that large doses (one gram) of sodium amytal produced a fall in the basal metabolic rate of more than

26 per cent. Exhaustion and emaciation are definitely retarded by its use; the patient is in better physical condition after the termination of the attack. Bleekwenn believes that the duration of the attacks is shortened, but reports only a few cases. Palmer and Paine found that 80.8 per cent of a group of 26 patients recovered or improved; five of these were in acute manic states, and all these recovered. Their work is, however, open to two criticisms: they report a small and uncontrolled series, and the sodium amytal was only one agent in a complicated regime, in which no individual evaluation of the factors can be made with exactness. Thorner reports a series in which unconsciousness was produced in every patient, and observes that the duration of the attack seemed to be shortened. He notes a distinct difference in the effect of the drug when given intravenously and by mouth: of 32 cases treated by oral medication alone, twelve showed decreased activity, nine made no change, and eleven showed a definite increase in activity.

Evidence of therapeutic effect in depressed states is not clear. Increased productiveness and accessibility have been reported. No evidence is present to indicate that depressions are aggravated. Wagner divides his series of patients, irrespective of diagnosis, into three types: the extremely autistic, those preoccupied by the environment but not threatened by it, and those in whom the environment constitutes a distinct threat. Fourteen of his 22 cases in the last group improved; nine recovered and five left the hospital before complete recovery. If this evidence be considered, we might expect benefit in cases of reactive depression.

Psychoneuroses: Several distinct situations in which sodium amytal is of use in these disorders may be mentioned. Unidentified persons (without respect to the type of disorder present) can often be identified from information which they produce while under the effect of the drug. The writer has recently seen two such cases. One was a young woman, evidently in a hypo-manic state, resisting stating her identity because of a feeling of failure at returning to her family in another state. Under the effect of sodium amytal, she gave information later found correct, about her

name, the names and the addresses of relatives. The other, a woman of sixty, revealed her first name and the name and address of her husband, following a period of amnesia believed to be due to marital difficulties. It might be mentioned here that criminals are often very resistive to giving information, even with large doses; the writer saw one case with a true prison psychosis in whom the drug was practically ineffective.

The principal use of sodium amytal in the neuroses, however, is for the purpose of decreasing resistance and clarifying doubtful or concealed material. Jelliffe has spoken here of the "drug analytic method." One case recently seen responded to injection of seven and one-half grains with an account of an unsuspected and very strongly homosexual preoccupation. A psychasthenic, in addition to baring much unconscious material, lost all her phobias for the effective period of the drug, and enjoyed riding in an elevator, a thing which she was usually entirely unable to bring herself to do. Another case recovered from an astasia when she was informed the drug would be used, and under its effects presented material which plainly indicated the cause of the symptom.

Several workers in this country are using sodium amytal in small doses in connection with light hypnotic therapy of the neuroses. The hypnotic state is more readily induced. Lorenz and others use sodium amytal in connection with suggestion, and prefer the second stage of narcosis—when the patient is euphoric or drowsy—because rapport is easy, inhibitions gone, and suggestions readily assimilated.

In Spinal Puncture, Encephalography: Undesirable reactions, of which headache is the most common type, occur in a large percentage of patients on whom lumbar puncture is performed. Stokes finds some reaction in 15-25 per cent of patients who arise the following day; Nelson reports twenty per cent; Perkel finds some meningism in 37.7 per cent of 852 cases. Garry and others noted that water diuresis was inhibited after administration of sodium amytal, and Bourne and other observers noted an accompanying hydremia. This mechanism suggested itself to Kulchar and King as indicating a possible usefulness for

the drug in lumbar puncture. These workers studied 199 cases under uniform conditions. They report marked rigidity in 41.4 per cent of the control cases, 2.8 per cent of cases having three grains sodium amytal by mouth. Headache occurred in 25.5 per cent of the controls, and in 13.5 per cent of those having sodium amytal.

Following this work, the intravenous use of the drug has become common in connection with encephalography. Dosage sufficient to overcome resistance and secure marked drowsiness—often as large an amount as nine grains—is used. Apprehension is overcome and the procedure is definitely easier to carry out. Pain is prevented both during the operation and for a considerable time afterward. No reports on the effect on incidence and severity of reactions are available.

Dementia Praecox: In the hebephrenic and paranoid types, no very striking results are obtained. Thorner finds no consistent effects, except that prolonged administration apparently makes paranoid cases more productive. He feels that the suppression of delusional matter in hebephrenics may be undesirable. In early cases, however, sodium amytal may be used as in other conditions, with the aim of discovering hidden psychic material.

It is, of course, in the catatonic stuporous states that the drug has its most dramatic effect. Patients who are mute, show cerea flexibilitas, and require tube feeding regularly lose all their prominent motor symptoms, converse and eat readily while the effect of the drug is present. An estimate of the mental state and the degree of deterioration is possible; some patients appear quite normal, others, more deteriorated, apparently undergo a metamorphosis into a state appearing identical with hebephrenia. The catatonic state, of course, recurs as the effect of the drug fades. Bleckwenn found that when a sufficient amount was given to produce unconsciousness, the lucid interval after waking was four to fourteen hours. With smaller doses ($3\frac{3}{4}$ - $7\frac{1}{2}$ grains) such an approximately normal state occurs immediately, is followed after a variable interval by sleep, and the catatonic symptoms usually reappear almost immediately on waking, if the patient is allowed to sleep for

some hours. Though a few writers seem to feel that the periods of accessibility obtained are valuable in therapy, there is little real evidence that the course of the disease is altered by periodic injections. Intake of food can be temporarily increased, a practical consideration, and institutional care may be simplified: the writer knows of one patient who had remained in bed for more than three years, who showed a change in behavior and was up daily after use of the drug. There was, however, no other improvement. Increasing tolerance and less reaction is the rule after long repeated treatments.

Research: The striking changes in behavior seen following respiratory stimulation, and their duplication and extension with the use of sodium amytal, offer a challenge to research. The mechanism of the changes, and the essential nature of the disorder in which they occur, are quite unclear. Various earlier theories applied to the action of sodium cyanide and carbon dioxide do not appear applicable to sodium amytal, though similar phenomena follow its use. Lorenz first believed that sodium amytal, by its vasodilator action, increased the oxidation of cerebral tissues; he later discounted this theory and decided it inhibited or dislodged the mechanism causing the stupor. Baneroff's colloidal theory has been challenged; results obtained with sodium rhodanate in cycloid disorders (which have been considered the antithesis of the schizoid states, as regards the state of the brain colloids) have been in disagreement. Many workers have seen no therapeutic effect of sodium rhodanate. Lorenz postulates a nervous mechanism similar to a reflex in catatonia, but does not attempt to define the dynamic agent. In view of the fact that the effects of sodium amytal in catatonia are seen largely at the physiological level, it is likely on this basis that its explanation will continue to be sought. Its phenomena are not, as Zador believed, dependent on the degree of unconsciousness obtained. A few details of its action indicate that the hypothalamus may be involved in its action, and hence in the disease itself. A definite knowledge of its effect would go far toward establishing the essential nature of catatonia.

MULTIPLE NEURITIS WITH PSEUDO-ATHETOSIS AND SHORT CONFUSED PERIOD IN A SYPHILITIC TREATED WITH NEO-ARSPHENAMINE

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In spite of the perfection of the treatment of syphilis reached by the administration of organic arsenical compounds and in spite of the precautions generally taken in order to prevent ill effects that may result from the injection of arsenical drugs, the number of accidents occurring from this type of treatment still appears to be relatively large and still new cases of arsenical lesions are reported. As the role of the arsenic in its physicochemical aspects is complex and manifold and as every individual struck by its deleterious consequences seems to have his individual type of reaction, the following report may be a helpful contribution to the solution of the various problems involved. According to Kerl (1), there is a variety of clinical pictures to be considered as an expression of the noxiousness of arsenical agents: an angioneurotic syndrome with cyanosis, transitory erythemas, nausea and vomiting; a fixed exanthema; and chronic forms of dermatosis. Furthermore acute gastro-intestinal disturbances, kidney and liver troubles, chronic edema, rheumatoid complaints, lesions involving the central or peripheral nervous systems, finally aplastic anaemia and thrombosis. Not long ago we had the opportunity of observing the recurrence of purpura hemorrhagica following the administration of a small dose of neo-arsphenamine. Events like this seem to prove that in the field of therapeutics mere quantitative calculations are of poor value without consideration of the more subtle and individual reactions which may be expected in any treatment with arsenicals. However, if we speak of toxic reactions we usually mean the cumulative effect of the drug stored in the body by repeated administration and deprived of the possibility of an adequately rapid detoxification or elimination processes which mainly deal with the functions of liver and kidney. The action of neo-arsphenamine or similar products reveals at least three different factors. First, the direct chemical effect of the

arsenical on the tissue. Second, the influence of the arsenical on the spirochetosis, or the finer immunization processes, generally known as the spirochetotropic and spirochetocidal effect. Third, the reaction of the individual to the drug, in other words sensitization processes or anaphylactoid reactions, during which the whole organism or certain organ systems contribute their part in the play between drug and spirochete (idiosyncrasy, anaphylaxis, and, as partial effect, neurotropism).

A rather unusual picture of arsenical damage is that of multiple neuritis. Whereas the literature dealing with the various types of multiple neuritis has reached immense proportions, the contributions to the study of multiple neuritis in syphilitics treated with arsenicals are still scarce, and single clinical observations slowly enrich our knowledge. Therefore, we find the report of the case we have followed a worth while enterprise.

Our patient is a thirty-year-old, single colored woman, with no remarkable familial antecedents. She had a normal physical development, she had reached the 7th grade in public school at the age of 16. Promiscuity and alcohol addiction began rather early. After her 18th year patient began to drink intermittently and was frequently intoxicated for two or three days at a time. In 1933, she suffered a bilateral pneumonia. In 1934, pains in the right foot of three weeks' duration, described as aching and burning sensations which sometimes would inhibit sleep and impair the endurance of standing, caused the patient to consult the nearest clinic. There, the blood examinations were strongly positive, and treatment with neo-arsphenamine was instituted. Patient received a dose of 0.3 grams neo-arsphenamine intravenously on August 13, 1934, and injection of 0.6 grams on August 21, 1934, and a third injection of 0.3 grams neo-arsphenamine on August 28, 1934. The first injection was followed by the development of an inflammatory process of the skin and of the gums. After the second injection she began to complain of pains in her back and after the last injection, she began having pains in the abdomen. Her condition became progressively worse and during the first week of September, 1934, patient began vomiting

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and having diarrhea and complained of numbness in both hands and legs. Patient adds that during this time she could not eat or drink; she would regurgitate easily and without pain everything that she ate. This state necessitated hospital care which she received from the 7th to the 24th of September, 1934. During this time she apparently recovered from her gastro-intestinal symptoms. Among the physical findings were an enlarged liver and a trace of albumen in the urine. After having returned home patient was treated with potassium iodide. However, her condition grew worse, she became unmanageable, and she appeared confused. Her mental disorder made her care at home impossible and consequently, she was admitted to the Delaware State Hospital, November 1, 1934.

At about the same time that her mental condition grew worse, patient observed involuntary movements of her hands. She was unable to walk about as her feet and legs became weakened within a short period of time, and were so contracted that she could not straighten them out. On October 25, 1934, she began to behave in a queer manner. She called her sister into her room and said "See that leg in the bed. That is not my leg, but belongs to Susie" (a cousin of the patient). She asked her sister to feel her legs, and said that one was soft, and the other one hard. She continued to talk in a confused way. At times she would get noisy, sit up in bed and clasp her hands. At night she slept little and was extremely restless. At one time during the night, her sister found her on the floor, nude, sitting with her legs wrapped around a lighted oil heater. Fortunately she did not burn herself. The next night, patient was found lying under her bed with a lighted lamp. With the exception of brief, rational periods, she continued mentally disturbed. She imagined she saw writings on the wall, and would sit for hours pretending to read these messages. During the end of her period at home, she often thought she saw in her room her little niece who had died a few months before. Patient herself stated later that during this period she saw people attack and frighten her, bury her clothes in the ground. She heard voices; for instance, that of a man who told her where some of her clothes that she had

lost were hidden. She imagined there was a woman plotting against her on account of the man with whom patient was going, that this woman had knocked her down, so that she was unable to walk or move. She told that she saw snakes and frogs coming out of her legs; an animal was sitting on her chest and trying to choke her. Patient did not always appear oriented for place or time, she misidentified relatives and friends, but continued to recognize her sister who attended her.

At the time of admission the patient was emotionally unstable, cried easily, but would give no reason for her crying. She misidentified people about her, declaring that she had seen the doctor, nurse and attendants previously. Her speech was under-productive. There was a tendency to depression. Mood swings were wide and rapid. She spoke of her sister having messed things up for her; declared that at the time of admission she had not eaten for five days, because no food was given her. Her orientation was faulty. She would make no attempt to name the month or the day of the week, she said that it was summer, although it was quite cold at the time. She thought she was again in the hospital where she had gone several times for treatments in the arm. She was very restless at intervals.

About a week after admission, patient's mental status began to improve, she became compliant, normally responsive, alert and rational. The emotional instability disappeared, attention became excellent. She developed insight into her previous condition, but had only a vague memory for the external settings of her confused period.

PHYSICAL STATUS

Physical examination at the time of admission revealed a rather thin colored woman, 29 years of age, unable to walk. There was keratosis about the hands and feet, and a small abscess on the left cheek. Teeth were in poor condition and gums infected. The heart was of normal size, its action rather rapid but regular. Blood pressure 100/80. Lungs were clear to percussion and auscultation. Pupils were equal and slightly irregular in outline. They reacted rather poorly to light, much better on accommodation. The other cranial

nerves did not present any abnormality. The tendon reflexes were all absent. The cutaneous sensibility was impaired over all extremities, more so in the legs. There was a marked decrease in muscular tone. The muscular strength was impaired throughout, but poorest in the lower extremities. The joint sensibility was lacking in toes and ankles, and was slightly diminished in the finger joints. Plantar reflexes were absent and there was no toe movement following sole stimulation. Patient showed spontaneous, coarse, involuntary finger movements of various types, resembling somewhat athetotic movements. These movements appeared very clearly when patient was asked to keep her arms elevated and her fingers spread out. Emotions seemed to increase the involuntary movements considerably. The movements were performed in a rather slow and irregular way, and in different planes. At times the legs also were moved spontaneously in knee and ankle joints, particularly the right one, without the patient being aware of it.

LABORATORY EXAMINATION

Urine showed a slight trace of albumin for a short time. Hemogram: 3,850,000 red cells, 65 to 70 per cent hemoglobin. White count normal. Smears for Neisserian and Vincent's organisms were negative. Serological examinations of the blood have always been strongly positive.

11-14-34—Kolmer Wassermann 44400

Kahn 332

8- 6-35—Kolmer Wassermann 44400

Kahn 344

Spinal Fluid Examinations:

11- 7-34—Kolmer Wassermann negative

Colloidal Gold 2224442200

(With a slight trace of blood,
probably accidental)

11-20-34—Kolmer Wassermann negative

Colloidal Gold 1345554411

8- 6-35—Kolmer Wassermann negative

Colloidal Gold 0000000000

From the time of admission, patient complained of heaviness in her legs, of a girdle like feeling in her chest, and sometimes of itching in her fingers. In February, 1935, she complained of aching sensations in her hands and fingers, of sharp pains in her right leg,

from the hip to the knee, but only of short duration. The stiffness of her legs continued. There were periods with pains in both legs and both arms. In April, 1935, patient became somewhat stronger, but still showed involuntary movements in her hands and legs. She often held her fingers spread out unintentionally. In August, a slight improvement was noticeable in the muscular strength of both legs. She was allowed in a chair and made spontaneous attempts at moving during the following months. In December, 1935, she complained temporarily of a repeated desire to urinate at night. External application of heat to the bladder region overcame this trouble. Patient was unable to stretch her knees on account of muscular contractions of both. X-ray examination revealed some atrophic changes of bone structure in the right and left femur near the knee joints. Continued physical treatment, passive movements and massage resulted in almost complete restitution of strength and free walking ability. The involuntary movements disappeared, the sensibility defect decreased gradually, equilibrium has become perfect. The tendon reflexes have remained absent up to the present time.

To summarize briefly, the essential data and chronological development of the case, our patient acquired syphilis at an unknown time; she suffered from a severe pneumonia in 1933. The first subjective complaints which may be interpreted as of neuritic nature were made in July, 1934, before the neo-arsphenamine treatment was started. Three injections of neo-arsphenamine given intravenously in August, 1934, were followed by severe skin and gastro-intestinal reactions. Simultaneously with recovery from these symptoms, there was a sudden onset of a severe polyneuritic paralysis with involuntary limb movements of pseudo-athetotic character and with a delirious period of about two weeks' duration. The most outstanding problems presented by our patient refer to the evaluation of the neurological and mental picture and to the differentiation of the neurological syndrome from nervous diseases commonly met with in syphilis. Thus proceeding, we finally may reach a synthetic interpretation or a definite conclusion for diagnostic purposes.

Unfortunately, we do not possess any neu-

rological data about this patient previous to her acute illness. The intense cutaneous and intestinal reactions which accompanied the neo-arsphenamine treatment had been interpreted as signs of arsenical intoxication, and we may accept this opinion without any discussion. The actual neurological syndrome, developing late but rapidly, is characterized by the bilateral sensori-motor disturbance of upper and lower extremities and complete areflexia. The sensibility disorder was of the typical peripheral type, thus indicating a pseudo-tabes or polyneuritis. However, slight pupillary changes (irregularity, somewhat sluggish light reaction) and subjective complaints, such as tight feeling around the chest and pains radiating from the gluteal region to the hollows of the knees were somewhat suggestive of neuro-syphilis (tabes). The serological test results, with marked colloidal gold curve and negative Kolmer Wassermann in the cerebro-spinal fluids do not appear to be conclusive for any diagnosis; they are rather misleading, as it is known that negative or partially negative spinal serology may be found in cases of neuro-syphilis. (2)

Pseudo-athetotic movements have been observed in cases of tabes as well as in those of multiple neuritis. The pseudo-athetotic movements of our patients were mainly made up of four different components:

First: A kind of shaking of the fingers in the plane of the hand (ulno-radial movements).

Second: Slower movements of the fingers in the dorsi-volar plane with the appearance of repeated quasi-purposive or playing movements.

Third: A fanning tendency of the fingers with hyper-extension of single fingers or finger groups to a variable extent.

Fourth: Involuntary movements of the legs, which resemble short jerks.

The involuntary movements which our patient has shown are easily understood in connection with the impaired superficial and deep sensibility function. The disorder of the deep sensibility alone on hands and fingers was not pronounced enough, we may justly say, to explain satisfactorily the presence of the involuntary motor phenomena. The decrease of the muscular tone may be considered

as an additional factor in their development. The involuntary movements could be somewhat controlled or counteracted by intentional movements. However, during pointing trials slight involuntary deviations of the index fingers, but not of the arms, occurred.

On the whole we believe that the acceptance of the neurological syndrome as multiple neuritis is justified and that the possibility of an abortive or somewhat obscure neuro-syphilis may be taken into consideration.

The mental picture of the patient was characterized by all outstanding features of the dysergastic reaction: clouding of the sensorium, disorientation, sense distortions of delusional and hallucinatory type, tendency to misidentifications, impairment of memory. The confused and delirious states are the expression of some kind of toxic reaction. A similar, but modified mental syndrome with polyneuritis is the well-known Korsakow psychosis, which is representative of the most various toxic and toxic-infectious conditions (alcoholism, diabetes, influenza, tuberculosis, metallic poisoning and more rarely, syphilis). Hence the co-existence of polyneuritis and a confused state is not exclusively limited to a special type of intoxication. We have been able to find in the literature a few cases of polyneuritis plus confused state following the neo-arsphenamine therapy of syphilites.

Abadie, Petges and Desqueroux (3) have reported the case of a 19-year-old man who, after having been treated insufficiently for syphilis and having been subject to physical over-exertion, a cold and pyodermic eruptions, suddenly after a single injection of salvarsan, developed a typical picture of polyneuritis and a confused state. Puerkhauser and Mauss (4) describe as Korsakow psychosis with polyneuritis and lethal issue, the incidence of a 57-year-old syphilitic woman, suffering from tabes, who after only two neo-salvarsan injections, underwent a progressive weakness of memory, a tendency to confabulation, and extreme fatigue. It is worth while mentioning that Jelliffe and White (5) describe mental symptoms constituting Korsakow psychosis in cases of acute chorea over-treated with arsenicals. Similar mental syndromes without polyneuritis were observed by Akowbjian (6) and Brzezicki (7).

There are various possibilities of interpretation as to the cause of the mental derangements above described, and the variety of aspects are rather confusing. Akowbjian mentions no less than six possibilities of interpretation; a toxic reaction, a cerebral syphilis with Korsakow, a Herxheimer reaction, an organic specific lesion of the brain, a biotropic reaction after psychic trauma, and finally an alcoholic psychosis combined with arsenobenzol polyneuritis. In regard to his own case report, he believes in an anaphylactic syndrome with irritation of the central nervous system. Brzeziński, for his own case, excludes cerebral syphilis, Herxheimer reaction and the recidivation of a formerly latent syphilitic affection of the brain tissue and emphasizes the direct intoxicating effect of the salvarsan. He contends that the Herxheimer reaction, as a spirillo-toxic reaction, occurs shortly after the first injection, that the toxic reaction is invariably connected with an abnormal disintegration process and with involvement of the internal organs, especially of the kidneys, and that anaphylactic reactions usually are accompanied by other angio-neurotic symptoms. He is more liberal in his views than a number of other students, who consider anaphylaxis as the only and primary cause of all arsphenamine reactions, whether of the skin or other organs (8, 10). In regard to the psychotic picture of our case, it is safe to regard it as a symptom within the whole complex of the sick individual, and we will try later on to give a satisfactory explanation for its occurrence.

We shall now turn our attention to the problem of multiple neuritis occurring in syphilitics after arsenical therapy, and we refer to the two complete reviews given by B. Parker Beeson (11) in 1920 and by F. Kellogg and N. N. Epstein (12) in 1934. The characteristic features of the arsenical polyneuritis have been described as follows:

A. Other signs of arsenical intolerance preceding the outbreak of the multiple neuritis (12 and 13), the late appearance of the first sensory symptoms, the painful character of the sensations felt in the extremities (14), and their prolonged duration; the late and sudden onset of the motor paralysis (3), following the sensory pre-stage.

B. The symmetry is not always respected (13), however, in many cases a final symmetrical development may be observed.

C. Of primary value appears the development of the clinical picture which is remarkably well presented by the French authors Sicard (1925) and Milan (1935), (Bibl. 15 and 16).

In accordance with these students, two different forms have been segregated; first an abortive sensory form, resembling closely the rudimentary tabes (Tabes Fruste); second, the more severe and often generalized sensorimotor neuritis. Among the more unusual signs may be mentioned involvement of the motor cranial nerves (facial and oculo-motor nerves). Optic nerve lesions, so often found in cases treated with Tryparsamide, seem to be a rare occurrence in treatment with the arsenicals of the salvarsan group. (Bibl. 17 and 18). No reports of optic lesions combined with polyneuritis following arsphenamine have been found.

The dosage apparently does not play any important role. There are quite a few cases published with development of multiple neuritis following only one, two or three injections. (Bibl. 3, 19-22). In some cases the treatment was not exclusively with arsenicals, but combined with mercury or bismuth (Bibl. 14, 23, 24 and others). However, the main stress was laid on the action of the arsenical.

The syphilis itself and syphilitic involvement of the nervous system (neuro-syphilis, tabes) merit first consideration among the various antecedents (13 and others). Chronic alcohol addiction (11) and infections of different types (for instance, respiratory, rheumatic, or pyodermic infections) are likewise important (Bibl. 3, 25 and others). The stage of syphilis in which the multiple neuritis due to arsenical therapy occurs is naturally varying. In the bibliography which was accessible to our study all stages of the basic disease were mentioned. The syphilitic involvement of internal organs (for instance, chronic syphilitic hepatitis) should not be erroneously attributed to the action of the arsenical, but may, when treatment with arsenical is instituted, play an important part in the development of the multiple neuritis (Bibl. 24).

In certain cases the development of jaundice was rather an expression of toxic action of neo-arsphenamine (Bibl. 19 and 26), as its beginning was acute and preceded by or combined with other gastro-intestinal symptoms.

Skin eruptions of various character frequently precede the neo-arsphenamine polyneuritis and are described as erythema, dermatitis, zona and pruriginous eruptions (Bibl. 12, 14, 27-29). Abnormal pigmentations of the skin seem to be rare (Bibl. 13, case 8). Mees' stripes on the fingernails, common in and characteristic of arsenic poisoning (Bibl. 30), do not seem to occur in cases of pure neo-arsphenamine intoxication. Neo-arsphenamine polyneuritis has (an important fact) been observed in non-syphilitics (Bibl. 21 and 31).

With these data in mind, we should be able to differentiate the multiple neuritis following neo-arsphenamine therapy from the various types of neuro-syphilis or multiple neuritis of other origins. However, as pointed out by Sicard (12), this problem may prove rather difficult in certain cases, particularly when a latent or abortive form of neuro-syphilis may be merged in the new appearance of the multiple neuritis. The other possibility also may exist, that a multiple neuritis causes an aggravation of the neuro-syphilis so that the symptoms due to neuro-syphilis may be falsely attributed to arsphenamine. It was said that tabes may be easily recognized by the characteristic lightning pains, typical bands of hypaesthesia, absence of muscular atrophy, the loss of the patellar reflexes, the Argyll-Robertson phenomenon, the presence of sphincter troubles, visceral crises, and positive serological findings in the spinal fluid. However, some of these signs may be lacking or incomplete in tabetics. The serology, even, exceptionally may be negative. The pupillary disorders may be atypical. In many cases the further development of the disease may contribute decisive moments for the final diagnosis.

Another important problem is the differentiation between neo-arsphenamine polyneuritis and syphilitic polyneuritis (32). Hassin and Read (22) and Pfeiffer (33) expressed the opinion that syphilitic polyneuritis occurs only in the early stages of syphilis. Kerl (34) has seen the outbreak of a multiple

syphilitic mononeuritis even before the appearance of the secondary exanthema; yet syphilitic polyneuritis has also been observed in later stages of syphilis (Bibl. 35 and 36). Clinically the syphilitic polyneuritis is characterized by a likewise more or less acute onset (35), by more or less definite serological changes in the spinal fluid (33) often by exclusion of other types of polyneuritis in the presence of typical syphilitic skin or organ affections and by immediate response to specific therapy. The syphilitic polyneuritis may be associated with lues spinalis. Predominant involvement of the upper extremities may be found in many cases of syphilitic polyneuritis. Its onset usually is not accompanied by elevations of temperature which commonly indicate the presence of medicamental polyneuritis (mercury or arsphenamine) or of infectious polyneuritis. The paralytic phenomena are said to be slowly progressing and the sensibility disorder to persist fairly long (Bibl. 3, 37, etc.).

Recent studies have shown the importance of infection of digestive disorders and of dietary deficiency (Bibl. 38-39) in the development of certain well-defined types of multiple neuritis. As far as the neo-arsphenamine polyneuritis is concerned, its cause seems to be evident, but this may not be entirely true. A careful study of the case should lead one to exclude those types of multiple neuritis which are brought about by an obscure source, for instance, by the ingestion of toxic agents of varied types (alcohol, arsenic, lead, etc.), by some hidden infectious focus or gastro-intestinal pathology. (Bibl. 31 and others).

The deficiency factor itself, which as recent studies have shown, has an unusual significance for the understanding of the development of multiple neuritis in general, may perhaps be one of the most important causative elements of the multiple neuritis due to arsenical drugs. Neo-arsphenamine is known to cause damage to the gastro-intestinal tract as an anaphylactic process, which has its parallel in the various skin changes (edema, erythema, dermatitis). The direct damage to the liver by arsenical drugs still is questioned, but apparently cannot be denied. (Bibl. 40). Not only that the mal-functioning of the liver cells, whatever its cause, would augment the

accumulation of the toxic agent and increase its effect by the failure of its detoxifying power, but it also would support the neurotropic action of the arsenical (24). As the recent experiences with liver therapy in multiple neuritis and other affections of the central nervous system (combined sclerosis, etc.) demonstrate, certain factors attributed to the normal liver have a definite curative, or at least protective, value; negatively speaking, their absence has a direct relation to the evolution of changes in the central or peripheral nervous system.

To resume our own case, it seems evident that different elements have contributed to the final completion of the syndrome we had under observation. As our patient was complaining of neuritic symptoms before her neo-arsphenamine treatment, it is evident that the field was prepared for further aggravation by both alcohol addiction and syphilis. The serious paralytic condition did not develop until the severe gastro-intestinal reactions following neo-arsphenamine therapy were subsiding. This tardy and sudden appearance of the most severe paralytic symptoms closely resembles cases which have been described and diagnosed as arsphenamine poly-neuritis. The role of the gastro-intestinal reaction in the development of this type of multiple neuritis has been stressed.

The simultaneous appearance of the confused state, although a rare event, may not present any particular difficulty to the understanding of the whole syndrome. As an expression of a lesion affecting the brain and resulting from an obviously toxic condition, it seems to fit reasonably into the physical complex. The question whether the confused state is only a neuro-syphilitic manifestation induced by the severe reaction to the arsenical drug, or is a reaction analogous to the severe polyneuritis, but involving the central part of the nervous system, a so-called arsphenamine encephalopathy, may be decided in favor of the latter assumption. As a concomitant symptom of the polyneuritis, it gives us the most plausible interpretation of its origin.

By its late appearance and its more or less sub-acute course, it can be easily separated from the acute arsphenamine encephalopathy.

This condition, as a rule, starts in with a comatose state from two to four days after the injection, and constitutes in many cases, the Herxheimer reaction of the brain. The acute neo-arsphenamine encephalopathy, fatal in most cases, occasionally may pass over, leaving symptoms of definite irreparable brain damage (Bibl. 41).

The problem of prevention of similar untoward events arises as a logical consequence. The interruption of the course of treatment after the first signs of abnormal reaction to the injection are noticed, skin tests and thorough blood study as emphasized in recent years (Bibl. 42 and 43), the administration of an antidote such as sodium thiosulphate, or amino-acetic acid (44), or of an anti-anaphylactic agent, such as adrenalin, liver therapy with extracts or cholagogues (Correlli (45) Jacchia and Truffi (46)), vitamin diet and modification of the specific therapy, may all help to control the outbreak of deleterious consequences occurring after the administration of neo-arsphenamine or similar arsenical compounds.

SOME PROBLEMS IN PHYSICAL DIAGNOSIS IN MENTAL CASES

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That physical disease occurs in the mentally ill patient and that many mental illnesses are caused by physical dysfunction is apt to be overlooked until we are brought into contact with cases whose severe mental condition causes us much concern about the prognosis and yet, who clear up promptly when some underlying physical illness is removed. A physical condition occurring in a mental case is apt to be, or is, unfortunately occasionally overlooked because a history which we have always been taught to consider as an important feature in diagnosis may be totally lacking.

Most mental patients do not complain when they become ill, in some instances because they seem to have lost all sensibility to pain, and in others because they fear that complaints of any kind may prolong their hospitalization. In many instances the complaints if made are so vague and so misleading as to be practically valueless.

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The problem of the general practitioner who considers a patient mentally ill and eligible for commitment, because he has suddenly become confused, incoherent, hallucinated, etc., at the onset of, or during the course of an overlooked, acute infectious process or other illness is well understood. The diagnostic measures which he has been taught to rely upon are of very little use; an abdominal condition which would ordinarily produce tenderness and rigidity may be characterized by apparent insensibility to pain and muscular relaxation; chest conditions which could be demonstrated by deep breathing may be obscured by a constant yelling or muttering on the part of the patient or refusal to breathe to the point of asphyxiation. Occasionally the patient will lead the physician astray by complaints of pain in one part of the body when the pathology is in another as a recent case of erysipelas of the right leg who persistently complained of pain in the opposite shoulder, and another of erysipelas of the face who had to be restrained before the latter could be treated as she insisted that her stomach was the cause of her illness and not her face.

Nurses, attendants, and physicians must be constantly on the alert for any unusual signs; listlessness in a previously active individual, a refusal of meals, a cough, difficulty in walking, must all be carefully investigated and usually without any help on the part of the patient who may succeed in getting around fairly well on a fractured femur, who may have pneumonia of at least twenty-four hours' duration without any complaints or who may have peritonitis without any of the classical signs or symptoms.

The following three cases are briefly recorded to illustrate psychoses resulting from physical conditions and relieved by treatment of the physical cause.

Case 1. A colored female forty-four years of age, who, three weeks before admission, became confused, was unable to formulate her sentences correctly, had difficulty in adjusting her clothes properly, and who appeared restless and nervous. At times she was irrational and disoriented. There was no evidence of hallucinations or delusions before admission. There was nothing of interest in her past history and the family history was negative.

At the time of admission she was only partially oriented, was mildly confused, and talked in a high-pitched sing-song tone of voice. Interesting points in the physical examination were enlarged, inflamed tonsils, muffled heart sounds, especially in the pulmonary region, hot painful infiltration of the left lower leg suggestive of phlebitis, and laboratory evidence of cystitis and pyelitis. The temperature varied from 98.6 to 103 in a twenty-four-hour period. Leukocyte counts varied from 4,750 to 15,600. Kolmer Wassermann and Kahn examination of the blood and spinal fluid were negative. Five days after admission the pharynx and tonsils which had given evidence of chronic inflammation became acutely inflamed and the whole throat was filled with pus which accumulated as rapidly as it could be expectorated and interfered with swallowing to such an extent that venoclysis and hypodermoclysis had to be resorted to. The mental picture was that of delirium. The patient picked restlessly at the bed covers, tried to get out of bed, had no idea of where she was and talked confusedly of difficulty in seeing. There were no significant neurological findings.

Within a month after admission much of the confusion had subsided as the various physical ailments had been treated and had improved. With a recurrence of bladder and kidney symptoms she had an exacerbation of the mental condition previously described; the pyelitis and cystitis were very slow in responding to treatment, and as long as they continued to produce fever the patient suffered from confusion, delusions, and occasionally auditory hallucinations.

Three months after admission the urine had become negative, the temperature was normal, and her mental condition had cleared up entirely. A tonsillectomy was performed at this time and at the time of her parole two months later the patient was absolutely free of mental symptoms. Parole notes have shown a continued improvement in her physical condition and freedom from mental symptoms which were undoubtedly brought on by toxic absorption from primary and secondary foci of infection.

Case 2. A colored female thirty-three years of age admitted January 6, 1936, with

a mental condition of approximately three days' duration. On January 3 she got up out of bed at 1:30 a. m. and left the house with her baby, going to a friend's house quite a distance away. She talked confusedly about not wanting to return home and about being worried and depressed. She showed some religious excitement and periods of depression alternating with ones of exaltation.

Investigation of the past history showed a sulky moody sensitive type of individual given to periods of depression. She had had an unusually good education for a negress, and was considered a bright student. During the ten years she has been married she has had six children. In 1929 her mother died. About this time the patient was pregnant, her child being born within a short time of the mother's death. She was so depressed by this course of events that it finally became necessary to send her to Byberry where a diagnosis of dementia praecox was made. She remained at Byberry for eighteen months and within a short time after returning home was again her normal self. In 1935 when her mother-in-law died she again became depressed, and felt that her husband was indifferent and disrespectful because he did not journey to California for his mother's funeral. When her father-in-law died she had a recurrence of the moodiness and depression which had marked her previous attacks, but none of these was serious enough to warrant admission to a mental hospital.

When she was brought to this hospital, she was confused and restless. At times she was very resistive and refused to let anyone come near her. At other times she would submit to examination for a short period but would soon begin to scream fearfully and to kick at the examiner. At this time she had a temperature of 102.4 axillary which could not be accounted for. The next morning it was reported that she had some vaginal bleeding, and examination revealed a point which had previously been missed; namely, that the breasts were engorged with a thin, watery fluid. When vaginal examination was attempted, she began to cry pitifully, "No more babies, oh, please, no more babies." As she was passing clots and as the uterus seemed slightly softened and enlarged, and the temperature continued elevated, she was immediately scheduled for a

diagnostic curettage which showed a small piece of placental tissue. For several days after operation she was slow in her responses and gave an inadequate emotional reaction. This soon cleared up so that within two weeks she had recovered remarkably, was able to carry on a conversation and volunteered the information that she feared another pregnancy. Upon being told that she was not pregnant she quickly shook off her depression, became a cheerful and willing helper on the ward and is now ready for parole. It is possible that she associates her earlier pregnancy with her mother's death, which had a rather upsetting effect upon her. She soon is to be paroled and it is believed that with proper contraceptive advice she should be able to make a satisfactory home adjustment.

Case 3. A white female 19 years of age first seen in the Mental Hygiene Clinic in February, 1935, where she was brought by her mother who complained that she seemed nervous at times, but that usually she showed indifference, disinterest in what was going on about her and a lack of energy. She frequently complained of epigastric pain. She had previously been under the care of a physician who had found nothing in her physical condition to account for her lassitude and nervousness.

Mental examination at this time showed listlessness and lack of interest. A statement that she was nervous and felt ill was accompanied by a meaningless grin. She said that she thinks of "funny things at night," but seemed unable to elaborate this statement. A psychometric examination gave her an I. Q. of 54. The test showed considerable scatter and was performed indifferently. Physically she was undernourished.

As she showed no improvement she was committed to the hospital April 15, 1936. At that time her mental condition was about the same as it had been when first seen in the clinic, but she now showed in addition to malnutrition a diffuse pneumonic process in the upper lobe of the left lung and a temperature of 104. Hemogram showed hemoglobin 75%, R. B. C.'s 4,260,000, W. B. C.'s 6,500, 66% neutrophils, 26% lymphocytes. An x-ray diagnosis of tuberculous pneumonia was made. On June 6, 1936 the sputum showed

tubercle bacilli. A more recent x-ray shows a small cavity between the first and second ribs on the left side. The patient still complains of epigastric pain, the cause of which has not yet been determined. A partial collapse of the lung has recently been attempted.

The question arises as to how long this patient has been suffering from tuberculosis, and it seems possible that she had an unrecognized lesion when her mother first noticed listlessness and apathy. In this case the tuberculosis was undoubtedly the cause of the poorly defined nervousness and other peculiarities of which the patient's mother complained. It will be interesting to know what effect an improvement in her health will have on her mental condition.

The following is a group of cases in which the diagnosis was obscured by a misleading train of symptoms or an asymptomatic course:—

Case 4. A white female 80 years of age admitted to the hospital May 8, 1935, with complaints from her relatives that she had always been queer, but that recently she had begun to show restlessness at night, memory defects, delusions that her mother and father were still alive and were coming home to visit her. Two weeks before admission she developed a limp in the right leg resulting, she said, from an injury sustained when an unknown man entered her bedroom and attempted to assault her. This limp disappeared when she thought that she was not being watched. There is nothing of interest in the past history except hematuria of brief duration about four years before admission.

During hospitalization the picture was that of senile psychosis, paranoid type with sensorial deficits and inconsistent stories of abuses she had suffered. When told that she could not go home until her injured (?) leg had healed, she began to walk without assistance. Unfortunately, at about this time she was knocked down by another patient and sustained a fracture of the neck of the left femur.

Physical examination showed an undernourished woman of waxy pallor. There were extensive arthritic changes in all joints. Blood pressure was 122/70. Heart and lungs

were negative. The liver edge was just palpable. There was slight pre-tibial edema. Kolmer Wassermann and Kahn tests were negative. The hemogram showed a moderate secondary anemia. Blood sugar was 104 mg. per 100 cc.; blood urea 22. The blood urea finally came down to 15 mg. Numerous urinalyses were negative. The course in the hospital was uneventful until February 26, 1936, when it was noticed that the patient seemed drowsy and listless and soon became comatose. Because of the previous moderately high blood urea a blood sugar and urea were taken and were found to be as follows: sugar, 278; urea, 56. The urine showed a trace of albumin and some clumps of pus cells. That afternoon the blood sugar was 320, urea 85. That night a catheterized specimen of urine showed gross and microscopic blood, sugar, acetone, pus and casts. The next morning blood sugar was 62 (insulin had been administered in the meantime) and urea 94. The leukocyte count was 30,000 with 90% polymorphonuclear cells. Frank blood had continued to ooze from the urethral meatus since catheterization the night before. This was the first hematuria that the patient had shown since admission. She died February 28, 1936.

Autopsy showed the bladder to be thickened and hemorrhagic. The mucosa was the site of a malignant tumor which appeared to arise from the posterior wall just above the trigone. The tumor was soft, gray and necrotic. The superficial portions were eroded and hemorrhagic and the tumor appeared to occlude the urethral orifices. The kidneys showed the calyces, pelves and ureters dilated to almost four times their normal size. There was metastasis to the regional lymph nodes, adrenals, liver, lungs, spleen and pelvic peritoneum. The uterus showed pyometritis with occlusion of the cervical canal but no involvement in the tumor mass.

This patient had never complained of any bladder discomfort, although there was sufficient cystitis to give rise to the usual symptoms. As she was in bed most of the time or confined to a chair and was incontinent as practically all senile dementia cases are, the question of hematuria could be checked quite closely. There was nothing before death either in the physical finding or symptoms to sug-

gest such an extensive carcinomatous involvement.

Case 5. A white female 36 years of age admitted to the hospital May 23, 1934, with a history of nervousness and fatigue following the birth of her last child in 1932. Her relatives stated that she seemed unable to concentrate or to carry on her former activities as well as previously. She began to express fears of people being after her. As she had been anemic since her baby's birth she was admitted to a local hospital where she received six blood transfusions within a period of three weeks with no noticeable improvement in her mental condition. She was spiritless, dejected, and subject to depressing dreams. She began to suffer from nausea and vomiting which cleared up after a gastric analysis revealed an achlorhydria which was treated accordingly. She entertained delusions about her food which she thought contained poison and filth, and which she accordingly refused to eat. Finally, in a greatly weakened condition she was admitted to this hospital.

During her course in the hospital she was apprehensive and fearful and ate poorly, making vague excuses about not being hungry. She was disoriented at times and suffered from numerous poorly defined delusions of persecution. The facial expression was one of depression and hopelessness. She felt that people were being killed because of things that she had done and that she must escape in order to save them.

Physically she was a small slender woman who appeared anemic. The hair of the head was dry, thin and wisp-like. There were practically no eyebrows, no pubic and no axillary hair. The skin was dry and scaly. The heart showed a blowing systolic murmur, not transmitted. Blood pressure was 110/80, later falling to 90/70. The pulse rate was usually between 55-65 per minute. The temperature was subnormal, varying from 94.6 ax to 96 ax. She did not menstruate. Laboratory examinations showed on admission hemoglobin 75% (Tallqvist) R. B. C.'s 4,270,000. W. B. C.'s 4,950; polymorphonuclears 59%; lymphocytes, 37%; eosinophiles, 1%. Kolmer, Wassermann and Kahn were negative. Urinalyses

and spinal fluid examinations were negative. Two months after admission the hemoglobin was 55% (Haden Hauser) R. B. C.'s 3,530,000. Achromia and poikilocytosis were present. Treatment with the usual hematinics had very little effect. At various times the patient complained of sore throat and was usually chilly. On June 28, 1935, she went into a series of clonic convulsions and died within a few hours. Autopsy findings of note were scanty hair, hard, small, fibrotic ovaries, atrophic pituitary (particularly the anterior lobe) and cystic degeneration of the pars intermedia.

In this case the onset of the illness following childbirth characterized by anemia, hypotension, bradycardia, scanty hair, dry scaly skin, atrophy of the pituitary and ovaries coupled with mild mental symptoms suggest a case of Symmonds disease or at least pituitary cachexia. Unfortunately the condition was not recognized until too late for institution of glandular therapy.

Case 6. A white female 39 years old admitted to the Delaware State Hospital June 21, 1935, with complaints from her relatives that following an operation for carcinoma of the breast in March, 1935, she had become nauseated vomited frequently and expressed the fear that she also had cancer of the stomach. One morning she was found in a stuporous condition immediately following which she was found to have lost her vision. Following this she was frequently confused and practically always depressed. She talked of childhood happenings and seemed at times to think that she was engaged in her former occupation of school teaching.

The patient's mother has carcinoma of the breast and her father is believed to have carcinoma of the bowel.

The patient, on admission, was confused, irrelevant, incoherent and disoriented in all spheres. She had the fixed delusion that if she ate anything she would become sick. When food was forced upon her she retched until she regurgitated it. Within a short time tube feeding had to be resorted to. Considerable ingenuity had to be used in order to distract her attention during the feeding as she de-

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EDITORIAL

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MENTAL HYGIENE ORGANIZATION

Many of us rebel against organizations, feeling that they are detrimental to individual activity. However, the tendency to leave a rural life and congregate in large groups in small spaces, a product of civilization, has resulted in organizations being formed to meet almost every existing type of evil. One of the greatest evils at the present date is the rapid development of mental conditions which disable the individual to lead an adjusted and productive life. For this reason mental hygiene organizations have been formed and as long as our present social organization exists they will remain essential components of society.

Very few individuals produce to their full capacity. Many are almost completely disabled by mental diseases of a neurotic type. Many are a complete burden to society because they are unable to use their mental faculties constructively, and are placed in institutions. These mentally disabled individuals cost the country many millions of dollars yearly.

Contagious diseases formerly cost the lives of many people but with the education of society through public health organizations death from these formerly very fatal diseases is rare. We have only to witness the present-day favorable progress which has been made in the handling of such diseases as typhoid fever and diphtheria. It was natural that the extinction of life should be of primary interest and that the organizations to save the living individual should be first developed. Public health organizations are now efficiently and adequately controlled and are essential parts of our life without which we would soon find that the physical health of the individual would be in increasing danger. It is now time that people turn their attention to the conservation of mental health and that the same type of education and prophylaxis be carried on in this field. It is because of this that the Mental Hygiene Society should be well supported. Organizations of this type are still comparatively in their infancy in considering them in comparison to the departments of public health. The physicians should lead in this work as it is primarily a medical problem—dealing with mental functioning and often with debilitating mental diseases. We sincerely plead that the members of the medical profession do their utmost to support organizations of this type and prevent the increase of mental conditions.

SOME PROBLEMS IN PHYSICAL DIAGNOSIS IN MENTAL CASES

(Concluded from page 124)

veloped the habit of regurgitating with remarkable ease. If her interest could be concentrated on something else during and for a short time following the feeding, she invariably retained it.

Physically she was a small, emaciated blind woman, with a lemon yellow pallor of the skin. The inside of the mouth and teeth were covered by a brownish film. The teeth were loose and the gums bled easily. The heart showed a rough systolic mitral murmur not transmitted. Blood pressure averaged about 136, 80. The lungs were negative. The abdomen was soft and showed no tenderness or palpable tumors. Over the left chest and extending into the axilla was a long scar at the site of a previous mastectomy. The scar gave no evidence of metastasis. Pelvic, rectal and neurological examinations were negative. Urinalysis showed hyaline and pus casts. Hemoglobin varied from 60% to 45% (Haden Hauser) R. B. C.'s 3,250,000 to 1,600,000. Gastro-intestinal series could not be done because of persistent vomiting. As the illness progressed there was sensitiveness to pressure over the skull, pelvis and femurs. On September 22, 1935, the patient had a clonic convulsion involving at first the entire body, later becoming localized on the left side but gradually clearing up entirely. The blood urea immediately following the convulsion was 36 mg. per cc. sugar 183. Later the urea fell to 25 and the sugar to 104. On December 9 the patient died. X-ray taken at this time showed extensive metastasis to the ribs, vertebrae, pelvis and femurs.

Significant autopsy findings were: autemortem clot in the pulmonary artery, extensive bone metastasis to the inner plate of the skull, ribs, vertebrae, pelvis and femurs. On microscopic examination the lungs, spleen, adrenals, and many lymph nodes showed infiltration with tumor cells. The brain showed symmetrical flattening and softening but no involvement in the tumor mass. The blindness could not be accounted for as the optic nerves

appeared healthy, were not encroached upon by the metastatic growths in the skull and the optic center was likewise not involved. The gastro-intestinal tract was negative.

THE SIGNIFICANCE OF PSYCHOLOGICAL TESTS TO PSYCHIATRIC DIAGNOSIS

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This article is an effort to suggest to the physician the values that he may find in the results of psychological tests. It is hoped that the physician who is not familiar with psychometrics may gain a reasonable impression of the significance of psychological measurement to his personality evaluations. It is not to be an erudite discussion of the bases or final validity of psychological findings.

We frequently meet a personality that is attractive and capable of rather elaborate verbalizations; yet who upon closer examination is discovered to be quite stupid. Patient, a woman age 30, gives the impression to the majority of her acquaintances that she possesses at least border line intelligence (I. Q. 75). She uses such words as pity, revenge and justice which have a mental age value of 12 years. The meanings are partial, but superficially impressive. Careful testing shows that her ability to make practical and social adjustments, that her mathematical ability, and her general orientation actually are at the mental age level of 8 years. She cannot state the similarities of wood and coal, an apple and a peach, or of a ship and an automobile with the sharpness usually found in 8-year-old children. She does not know what to do if a friend hurts her without such intention. She cannot approximate the date. She is classifiable at the low grade moron level.

Another woman, age 35, impresses her acquaintances that she has less than average intelligence. Three physicians guess the intelligence quotient at 65, 80 and 100. Her manner is silly. She gives irrelevant answers to questions. She appears to lack insight into her own condition. However, when persuaded that it is to her advantage to do her best on the mental test, she passes it at the superior adult level,

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I. Q. 124. She defines the words: ochre, milk-sop, ambergris, perfunctory, piscatorial. She repeats 7 digits backwards, also she reproduces in her own words an abstract passage on the values of life at the superior adult level.

These results require a reconsideration of her motivations. Her irrelevancies are seen to be disguises rather than confused thinking. A new approach to her level of thinking must be made. It is necessary to make a new interpretation of her past efforts to achieve social and economic adjustment. Diagnoses that imply deterioration such as dementia praecox, of which there had been some consideration, are eliminated.

Another patient gives absurd interpretations of his experiences. We are convinced that he is sincere in his statements. Is he mentally defective or is he suffering delusions?

A girl of doubtful ability and questionable experiences recently was tested at court. She told a complicated story of intimidation by some "racketeers" whose political influence was supposed to extend into important social agencies in other states. The story was very well knit and coincided precisely with such objective records as were available. The question then was as to whether she had fabricated this story out of the suggestions of cheap movies and magazines, or whether she was giving a reasonably accurate statement. The tests show that she is not familiar with information concerning social organizations that is on a par with the content of her story. It shows that she lacks the imaginative ability that the assumption of fabrication would require; and that she lacks the ability to formulate cause-effect relationships of the order appearing in her story. The test itself appears to be reliable. It confirms the already obvious fact that she has the capacity to give reasonably accurate "descriptive" accounts of what happens. It shows, however, that she is limited to description in handling accounts of the complexity of her story. This leads to the conclusion that even though she may provide some ornamentation, the main outline of her story must have some basis in her personal experience.

A girl is thought to be of very high intelligence by the worker who has accompanied her

to series of courts, where she has fabricated a variety of confusing stories. The examining physician thinks that she is of border line intelligence in spite of the fact that she receives A's and B pluses in school in spite of frequent absence. The intelligence quotient on the Binet Scale is 107. The Ethical Discrimination test gives a moral quotient of 76. The physician has been concerned with her repeated sexual delinquencies, which are not characteristic of girls of average intelligence. The Ethical Discrimination Test shows that she is particularly weak in "offense evaluations." Both observers have been correct in their observations. The tests simply indicate the areas to which their respective conclusions are applicable. They indicate that the girl is capable of learning what is appropriate. She is observed to be pragmatic in her outlook. She simply has been learning from the wrong people. If placed with wholesome and equally attractive people, the prognosis is good. We observe that once the diagnostic premises are established, the recommendations quickly may follow.

It now will be well to suggest the framework of our thinking concerning intelligence. Paraphrasing David Weeksler, "Intelligence is the native capacity to perceive and handle a novel situation." That a primary characteristic of the intelligence scale is its novelty is demonstrated in practically every examination by the remonstrances of the examinee that nobody has taught him how to do this kind of assignment. The ability to perceive and handle a situation involves a variety of methods of perceiving, retaining, assimilating, relating and applying. It involves the complete stimulus-organic-response unit. In the measurement of intelligence we therefore test such functions as color recognition, weight discrimination, simple aesthetic discrimination, time and place orientation, personal information, general information, rote memory, logical memory, memory for designs, mental manipulation of visual and auditory images, definition of similarities and differences, solving of problems, interpretation of situations, recognition of absurdities, ethical implication of situations, and what to do under given conditions.

The particular material with which the examinee works in taking the test may be physical or verbal. The psychologist's function is to evaluate the mental processes that are called into play. In this part of the diagnosis, the only concern about content is that it shall be comparable for those taking the tests. This often calls for an evaluation of emotional, experiential and other considerations that might invalidate the comparability of the test situations.

Mention has been made of the age levels. All are familiar with developmental histories in which for instance perception of a voice is followed by perception of a bell; perception of a square is followed by perception of a triangle. Or more frequently, we may have observed the time relationship of walking to talking, or of the use of verbs which is preceded by the use of nouns. The enumeration, description, and interpretation sequence is applied to increasingly complicated situations in a spiral order. A mental test is a systematic weighting of these development signs to arrive at the general or average level of the several functions or mental processes in terms of the average for any age group. The weighting that gives that average which maintains a constant ratio to chronological age is accepted as reliable and valid.

If the chronological age is ten, and the individual responds at the level usually responded to at age 8, his rate of development is $8/10$, that is his intelligence quotient is .80. If the ratio is 1.00 the rate is average. If it is 1.15, it is considerably above average. If it is 1.40, it is near genius.

This leads to a consideration of special abilities and defects. The general finding is that abilities tend to correlate rather than to compensate. However, they do not correlate 100%. In the divergences, or scatter, we find opportunities or problems. Educational, vocational, avocational and social adjustment depend on the organization of these capacities.

Frequently we find delinquent boys, who are lacking in verbal intelligence. We look to the trade school as a place for adjustment. If the manual ability is superior to the verbal ability, we stress this fact. However, it often happens that the manual aptitude is lower than the verbal aptitude. One such boy has a

Stanford-Binet quotient of 76, and an Arthur Performance quotient of 54. When we find this phenomenon we simply can wish that some ingenious educators could work out a program and that the public would support it rather than be forced to protect themselves against what promises to be an unsatisfactory adjustment.

Another boy having a Binet quotient of 106 and a Performance quotient of 89 has a more happy outlook. His Binet quotient is above the average for the Trade School, while the Performance ability is about average. The Binet quotient indicates that "this boy cannot hope for success in an academic direction, and at the same time he can not hope to be superior as a mechanic. His intelligence is sufficiently high for him to do well managing a filling station, or in doing comparable work. He has expressed interest in commercial activities. Possibly he should consider commercial training, although this suggestion cannot be urged on the basis of our limited data.

"He states that he has been a foreman of one project at the school. He feels that a boy is selected to be foreman 'if he knows the most about the job.' When he reflects in this vein, he becomes enthusiastic about the Trade School, its equipment and the type of work done. Earlier in the day he expressed the desire to leave the school. He now says with some pride, that there are boys who have held jobs as regular mechanics, who are attending in order to get more advanced training.

"If he continues in a trade school it will be well to emphasize what is presented as theoretical training in the curriculum, and to open up opportunities for him to exercise leadership. Also, it will be well to establish a regular contact for him at the office, which will dramatize for him the value of accurate statements of fact. This will make a responsible type of behavior more meaningful to him."

We are more happy when we discover a special aptitude in the use of the hands. Often, however, the situation is complicated by a poor grasp of ethical values. A boy may be interested in the care of firearms, or automobiles, and exercise a license which leads to conflict. An adult may be able to perceive beauty of line, color or rhythm, but be unable to retain an eidetic image which makes repro-

duction possible. He may be able to reproduce what he sees and hears, but be unable to originate anything of his own. The limitations may be in capacity, in experiences or in attitudes. It is the task of psychology to measure, describe, and evaluate these factors. Psychologists barely are getting under way in this job. But they have a large laboratory literature on which to draw, and as this background is brought to bear on clinical problems, through further experimentation in the clinical field we can hope for more practical contributions. The fundamental significance of this type of diagnostic data, to psychiatric diagnosis and treatment increasingly will become apparent.

We might summarize that the psychologist now gives much of his time to distinguishing between real intelligence and a superficial verbal brilliance or lack of verbal expression, between special aptitudes and tricks, between underlying personality structure and techniques of expression, between positive interest and compensatory drives. Such distinctions increasingly are being given objective quantitative consideration.

The psychometric techniques are relatively new and a mature professional use of them has not fully developed. When it is observed that a patient's response is of the hair trigger variety, we are none too certain of the significance of the observation, although we are fairly confident that the patient is manic or psychoneurotic rather than deteriorated. We regard his quotient as a measure of his present functioning rather than of his latent capacity. When it is noted that a man is able to reason very well, if the data is kept before him, but that he cannot keep factual data in mind, we do not have sufficient research to appraise objectively the psychological, vocational and social implications, although we are quite sure that the man will be embarrassed into constructing a pattern of rationalizations. When we observe that vocabulary is good; that patient can discuss with clarity the associations established earlier in life; but that ability to establish new associations is very poor, and that practical judgment is very low, we recognize that there is some form of deterioration—dementia praecox, alcoholic, general paresis, etc.—although the type of mental process does not indentify the type of

deterioration. If immediate rote memory is fairly good, but sustained attention is poor, we probably are dealing with a mental defective. At a higher level of intelligence, this description applies to the neurotic. If patient is relatively poorest in following involved directions, we recognize a difficulty in coming to a decision that is characteristic of the compulsive neurotic. We are at the stage where we can make these observations, but must guess at their significance in terms of the clinical picture as we are impressed by it. The psychologist administers the objective mental tests; the psychiatrist indicates their significance in his diagnosis. The psychiatrist's recommendations affect every phase of the patient's life, and he needs as much objective data as he can procure and subsume in his diagnosis.

So much for process. Our next consideration is attitudes, beliefs, prejudices and interests. The Character Education Inquiry has made and is being followed by remarkable contributions to the study of honesty, cooperation, personal and social attitudes. We might consider one of these phases of personality testing. A girl of average intelligence is failing in the commercial course in high school. The Clerical Aptitude Test shows that although her classification of correspondence is 100%, her ability to work with numbers is extremely poor. Further it is found that her interests are limited to "two tendencies": (1) A liking for fine clothing, (2) A desire to participate in group activity, but not to accept any large responsibility. She is interested in order and arrangement, but this interest is limited to personal belongings. She definitely dislikes making accurate outlines. Her commercial interests include earning money and spending it for personal satisfaction, it does not include bargaining and displaying merchandise.

In the following list of interests, her personality requirements are quite definitely suggested (for economy, let 5 equal *like very much*, let 4 equal *like somewhat*, let 3 equal *neutral or indifferent*, let 2 equal *dislike somewhat*, and let 1 equal *dislike very much*). It is helpful to contrast the items on each line as these are interpreted in terms of clothing.

or the type of interest which might be generalized to other possible interests.

LIKE	DISLIKE
5 To earn money to buy clothes	3 Bargain or display merchandise.
5 To plan a dress so that the colors will be suitable.	1 Draw; paint; make sketches of dresses, design Christmas cards.
5 To observe the texture and color of fine cloth or beautiful skin.	1 Observe machinery, insects, plants, people.
5 To try new patterns of color combinations for dresses.	1 Decorate a room, stage, etc.
5 Do fine needlework.	1 Trace patterns of maps; cut out pictures.
5 To arrange a dresser.	1 Take accurate outlines.
5 To iron, wash dishes, sweep.	1 Live on farm; drive car in all kinds of weather.
5 To attend parties.	1 Sell tickets; keep up conversation.

We notice in the likes an emphasis on clothes, cloth texture, needlework, ironing, and places to wear fine clothing. Throughout this series of interests, we find a very strong liking for work and possessions that is concerned with personal belongings that have a high sensory value.

The second emphasis is on participation in group activities and minor social responsibilities.

LIKE	DISLIKE
5 Have charge of house while parents are away.	1 To be a captain of a team.
5 To comfort children; especially interested in babies.	3 To soothe a vexed person.
5 To keep diary of own ideas.	1 Have hot argument.
5 To do fine needlework.	1 Revise stories.
4 Play musical instrument — Hawaiian guitar preferred.	1 Make up tunes, listen to music, discuss music.
5 Washing, ironing, hiking.	2 Cut grass.
5 Skate, ski, swim.	2 Garden work.

We observe in this series of items that patient attempts to secure ego-satisfaction through relatively modest activities, activities that require a minimum of personality dominance. Further study should give a basis for interpreting the limited self-assurance, the circumscribed character of her interests, the special aptitudes and the possibilities of immediate educational adjustment. The significance of this type of testing program to psychiatric diagnosis is too obvious to require further elucidation.

The rate and course of mental growth often is a vital part of the clinical history. Recently a child's motor responses, when held so that his feet touched the table, were described as normal. They were for a child at a younger age, but not at the age of the child under consideration. An x-ray revealed an enlarged pituitary gland. This suggests the importance of quantitative norms based on statistical evidence based on a representative sampling of the population.

Recently a child was brought to the Clinic with a detailed medical developmental history. From this history it is estimated that at age 2 years his intelligence quotient was 85; now at age 5 years it is 42. Examiner's remark was: "Such a gross retardation after a period of normal development must spring from an organic disorder." It since has developed that the child's ailment was congenital syphilis.

Another child at age five months was rated an I. Q. of 96. At age 24 months on the same scale the quotient is only 53. The first test required no language or social cooperation. The scale at the present level is heavily weighted in these types of tests. More elaborate testing shows that he can complete form boards above the average level. Inquiry shows that at 28 months he made mud pies and watered flowers; at 40 months he attempted to transplant seedlings. Knocked peaches from the tree with a clothes prop, and turned hose on and off by aid of leverage secured with a funnel. Each day he filled a bucket of water until discovered. At age 36 months he unwrapped a package and at 42 months he wrapped a package. He will do none of these things on request. We then conclude that his ingenuity in manipulating physical properties is normal, but that he lacks social cooperativeness and language development. At times he is quite destructive and when dissatisfied in any way, he becomes very unruly, throwing things about the room, lying on the floor and bumping his head, or bumping his head against the door.

When seen the second time he is easily amused and can be induced to enter into test situations to the extent that the examiner's influence is not detected. He has an interesting habit of sitting on the floor and looking meditatively, possibly vacantly, for a consid-

erable period, and then getting up to rush to perform some task.

On further examination by means of x-ray, it was thought by several consulting physicians that a brain tumor existed, others questioned this possibility. It is quite obvious from psychological examination that the development of certain of this child's latent mental capacities is obstructed.

Another child showed above average development to age 6 months. He then dropped to average until approximately 11 months. Since that time there has been relatively little growth and at age 27 months we find him 9 months retarded. Part of this may be accounted for by dependency on the mother. Neurological signs are reported to be absent. The fact of 9 months' retardation at age 27 months in a child having had a rapid rate of development in his early months, and coming of superior parentage, remains to be adequately explained in the psychiatric diagnosis. The diagnosis is pending further observation under an altered developmental program.

Two alcoholic cases are being diagnosed. Is there deterioration? One shows in his test that his efficiency in perceiving and handling situations is on a par with his abstract language ability. No deterioration is apparent. The other man of equal or higher abstract intelligence is found to have only average judgment. He fails those tests calling for the making of new associations. Deterioration is indicated.

CONCLUSION

This paper merely suggests the purpose of testing. Tests are objective means by which to discover essential facts; to check on observations; to limit, to extend, or to elaborate conclusions. They are tools—nothing more. If found wanting the difficulty may be found in their application. If they are accepted as more than tools of investigation, the diagnostician will be distracted from the full use of his intelligence. If neglected or discredited, the diagnostician's subjectivity will assume too large proportions.

The psychologist is expected to interpret the objective observations concerning phases of the personality. The diagnostician is expected to synthesize these interpretations into

the total clinical picture. The diagnostician in the case may be the judge, the educator, the visiting teacher, the social worker, the minister, the family doctor, the psychiatrist or it might be the psychologist himself. Psychometric procedure is a step in the diagnostic program. Its findings are a part of the diagnostic data. In a psychiatric clinic, the psychiatrist interprets the psychometric results in terms of the total developmental, social and clinical history.

PSYCHIATRIC-SOCIAL TREATMENT IN THE MENTAL HYGIENE CLINIC

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Many of those who use the Mental Hygiene Clinic as an adjunct to their own services—private physicians, hospitals, schools, social agencies, courts, and others—have manifested interest not only in the results obtained, but also in the methods and techniques employed. Such techniques are extremely varied and are derived from a vast theoretical background, which has its roots in medicine, philosophy, and sociology, and from which seems to be evolving an integral "science of human relationships". We might say, indeed, that mental hygiene clinics are the principal laboratories of this as yet imperfectly formulated science. Certain general principles, however, are already well-defined and capable of practical application, and in this paper it will be shown how they may be applied by one division of the mental hygiene clinic staff, the psychiatric social service.

The mental hygiene clinic deals, of course, with the individual and his problem. Its purpose is to define each problem clearly, discover its causes, determine which of them are subject to alteration, and then apply the treatment which seems most desirable or feasible. To achieve this purpose is not always possible, since we are dealing with the complexities of human lives, but it is toward that end that the clinic makes its extensive examinations of the patient's physical and mental make-up and his social environment. It is with this last, the social study, that the psychiatric social worker deals.

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The "psychiatric-social history" includes a survey of the patient's physical, mental, and cultural heritage, for two or three generations, in direct and collateral branches; a detailed account of the patient's life and reactions, including the development of his present problem or illness; and, above all, a searching inquiry into the emotional interactions of the persons with whom the patient is in most intimate contact.

When the examinations by psychiatrist, psychologist, and social worker have been completed, all the findings are interpreted, and it is determined, usually in a staff conference, what direction the treatment is to take and by whom it is to be administered. To reach a conclusion a number of factors must be taken into account.

In the first place, our aim is two-fold: on one hand, we wish to make the patient a happier individual, less at odds with life and emotionally more fully released to achieve his ambitions, since it is known that thwarted or repressed wishes are behind most anti-social behavior and much mental illness; on the other hand, we must help him to achieve this emotional emancipation by following not an ego-centric pattern, thus perhaps becoming a greater liability to his family or community, but rather an altruistic pattern, making a contribution in the economic and social world.

A second factor of prime importance is the etiologic analysis of the problem, as it arises out of the patient's reaction to his environment. To what extent is the individual responsible for the maladjustment, and how far is it due to a faulty environment? In determining the individual's part, we consider his physique and health, his psychological make-up as it has been determined by tests and observations, his past social adjustment and standards as shown in his history, and finally the present psychiatric diagnosis—whether he shows psychotic manifestations, neurotic reactions, or emotional conflicts, and particularly their severity and their rigidity or mutability. The faultiness of the environment, a relative matter, must be decided in each case on an individual basis, for material surroundings accepted as matter of course by one might seem luxurious to another and

exigent to a third; personal emotional needs vary not so much with economic or social status as with a certain individual balance between dependence and self-direction, or with the relationship between the quantity and kind of emotion requiring expression and the availability of persons on whom it may be bestowed, or with inhibitions inculcated during the early stages of emotional development.

The third factor in planning treatment is the pragmatic one: granted that responsibility for the maladjustment can be allocated to certain features of the environment or characteristics of the patient, then which of these are alterable, or what can we substitute that will be more desirable, or how can we compensate for a fixed deterrent to adjustment? Through the careful study, the analysis of the problem, and a knowledge of available resources, we hope to be able to formulate a feasible treatment program. This, too, is subject to variation, according to circumstances and the needs of the individual case. In child guidance cases, for example, the child often has repeated treatment interviews with the psychiatrist, while the social worker is engaged in altering the environment by working with members of the family whose emotional attitudes seem to have been causatively involved in the development of the child's problem. This arrangement may be reversed, however, if it is shown that a parent's maladjustment has reached the proportions of a mental illness; under these circumstances the psychiatrist treats the parent, while the social worker deals with the child. In still other situations involving special psychological problems—certain reading and spelling disabilities, for instance—the psychologist especially prepared for this work may attack the major problem while other members of the staff work in related fields.

The time required for the study and treatment may vary widely. Generally several days are required to obtain the history information, make the initial clinic examinations, determine the etiology, and plan the treatment, after which weeks or months may be needed to apply the treatment, since this may consist of the gradual unfolding by the patient of his fixations, with resultant emotional

catharsis, freeing of repressed instinctive urges, alterations of previously fixed attitudes, and growth toward emotional maturity. In some instances patients continue to develop emotionally over a period of years under clinic guidance; in these cases the slowness of growth is apt to be due to fixed unfavorable elements in the environment, or in the patient's physical or psychic constitution, which though recognized early in the study or treatment, may not lend themselves to rapid alteration. On the other hand, it is sometimes possible to effect a radical change of a permanent nature on the basis of short but intensive study. The permanency of such a change can be assured only where the primary cause of the conflict can be ascertained and treated directly.

For this paper, two cases of the last-mentioned type have been selected which, in the method of handling, are characteristic of Mental Hygiene Clinic technique, but which were capable of more rapid treatment than the average.

Case Number 1—Ernest, a twelve year old boy, obese, slow in motion, was referred to the clinic as an incorrigible school problem. He was failing in the seventh grade, not because of inability to grasp the work, but because absences of from several days to a few weeks at a time gave him so many zeros that his average was below the passing mark. The end of the school year was approaching, and as Ernest's truancies threatened to damage the discipline of the school, he was being considered for demotion to the sixth grade, or placement in a special class for retarded children.

The social history revealed that the home background was of good average type, the family socially well adjusted, and the educational and cultural levels adequate. The family had a kind, affectionate attitude toward patient and believed he was happy while home. They had no knowledge of his whereabouts or activities during his absences, as he could never be persuaded to discuss them. He was usually quite disheveled when he returned, but seemed never to have been in any trouble nor to have suffered privation. They had worried about him while he was away and also were concerned about his impending

school failure, but had used no harsh punishments, as they felt sure these would avail nothing. Patient had always been quiet and well behaved, spent his spare time reading library books on various topics, had few friends, and no enemies. From the school it was learned that upon returning after a prolonged absence, patient would take his place with the rest of the class in a matter-of-fact fashion and give perfect recitations.

The physical examination at the Clinic disclosed that his physique was characteristic of a hypo-pituitary condition, though otherwise his health was good.

During the psychiatric examination, the boy was found to be quite sensible and frank. To the psychiatrist he explained his absences from home and school as follows: At times he grew tired of the seventh grade work, which was so easy as not to be interesting to him; he had read books about other places and people, so he had gone to see several cities from 50 to 200 miles from his home; there he would get a newspaper route, earn enough each morning to pay for three meals at a "bean wagon" and admission to a movie show, find a hayloft or delivery wagon in which to sleep, spend any extra hours quietly sightseeing or reading at the Public Library, and eventually when tired of his adventure, return home.

The psychological test showed that this twelve year old boy had a mental age of seventeen years, and an intelligence quotient of 145. The Educational Achievement Test indicated that although only in the seventh grade, he had acquired by himself an education equivalent to that of a high school sophomore.

In the analysis of this problem, it is obvious that we need to find a more adequate outlet for this boy's abilities, and place him in an environment where he can achieve his desires in a socially acceptable manner. In place of his hobo type of adventuring, we may provide him with adventure in keeping with his extraordinary innate ability. His lack of friends indicates his need of opportunity for personal growth. His environment, therefore, must be changed at the points where it has failed—namely, school placement and social facilities. His physical condition requires endocrine therapy.

A treatment plan was made at a conference between psychiatrist, psychologist, and psychiatric social worker, and its application immediately begun. The family physician undertook the administration of the endocrine therapy by which it was expected that the boy would lose some of his obesity and grow taller and stronger. To the school, the Clinic recommended that the boy be placed in high school and that arrangements be made for him to join a boys' recreational group. Some of the school personnel had difficulty in accepting the idea of promotion to high school from the seventh grade where he had been supposedly "failing", since this seemed to be a reward for his "bad" behavior. It was the work of the psychiatric social worker to persuade them of the wisdom of this action, which was ultimately accomplished. During the following summer, the patient was sent for a month to a boys' camp, where 34 of the 45 boys were "problems" and the counsellors were especially trained to work with personality difficulties. At first patient was outstandingly "different" from the other boys because of his physique, and because he did not know how to make friends, but gradually he became identified with the group, and took an interest in the lighter athletic sports, as well as in nature-lore, of which already he had considerable knowledge as a result of his reading and which he enjoyed studying further. When a pageant was needed, it was Ernest who wrote it—all about Indians and early settlers!—drawing material from his store of historical information; then he helped coach it and played one of the leading parts. Finding himself accepted by companions of his own age, he responded quickly to them, discovering the value of friendship, an aspect of life he had formerly missed.

In the fall, he adapted easily to high school work, stood well in his classes, and soon was planning to go to college and some day be a scientist. He continued to get along happily at home, showed no inclination to run away, and made friends, slowly and shyly, but surely, among the other high school students.

In this case we see the boy's self-confidence restored and a new social attitude cultivated, both resulting directly from a change in his school placement and opportunity, and from

the increase of social advantages. The correction of the school situation was accomplished almost immediately. The adjustment of the boy's personality naturally required a longer time, since it was dependent on a growth and learning process.

Case No. 2. Miriam, a sixteen-year-old girl, was a patient at the Child Guidance (Mental Hygiene) Clinic of a high school in a large city. She was in her third year but had barely the equivalent of sophomore rating, as she had had trouble with her work all three years and had failed several subjects. A crisis had just been precipitated by the Dean of Girls' criticism of patient's clothing. In the presence of a number of other students the girl had been reprimanded by the dean for wearing a light sweater tucked inside instead of outside her skirt and the remarks had gone on to include aspersions upon the girl's character for which there was no basis and harsh shaming criticism of her scholastic standing and her home training, until the Dean was in anger and the girl in tears and rebellion. The social worker was asked to "give the girl a good talking to" about her behavior. Instead, this interview was used as the beginning of the social study and treatment. For the first time since her difficulties at the school began, the girl felt she had a friend who would listen to her story, and invited the social worker to visit her mother at home in the evening.

A preliminary psychiatric examination at the clinic disclosed nothing particularly significant except a slight sullenness and seclusiveness, both of which seemed to be more a response to unhappy circumstances than habitual traits of character. The psychological test revealed that the girl had an intelligence quotient of 90, which is at the lower edge of the "normal or average" group, and barely above the "dull normal". With such intellectual limitation she would not ordinarily be expected to do much with high school work, but she showed a strong drive to continue her education, in spite of difficulties, her emotion apparently being derived from something in her social situation. The case was turned over to the social worker for further investigation.

In the taking of the social history from the mother many facts were brought out, of which the following were noted by the social

worker as significantly related. The parents were Austrian Jews. The father had come of a socially superior family, all of his brothers being army officers. Patient's mother was of a family of artisans, and the mother herself had been a servant in the paternal household. After the marriage patient's father had been repudiated by his family and had brought his wife to America, where he died several years later. The mother, who had little education, had no means of supporting her four children except by poorly paid factory labor. To supplement her scanty wages, she took piece-work home and worked at night by a kerosene lamp. The home consisted of three little rooms on the fourth floor of a poor tenement house. Yiddish was spoken, as the mother had never learned English. The oldest son, a very bright boy, was working his way through a distant university and was about to graduate. The elder daughter was said to be an exquisitely beautiful, vivacious girl, who dressed most attractively on very little money and who was attending a local college and planning to be a teacher. Patient, who was not naturally good-looking, had none of the sister's attractive personality, and was intellectually inferior to both brother and sister, nevertheless was being expected to follow their lead. A younger brother was running the streets with little supervision.

Behind the mother's discussion of her husband's family, her exhibition of their portraits in full military dress, and her discussion of her children's future, the social worker discerned an all-absorbing ambition that her children should live up to the standards of their father's family. If this could be brought about it would achieve several aims; it would justify her in the eyes of the in-laws who had repudiated her husband and would place her on a par with them, at least to the extent that she identified herself with her children; guilt feelings which she may have had in connection with her marriage would be compensated by the "atonement" which she was making; and her strong conviction of her own inferiority would be compensated for vicariously in her children's success. Thus through her identification with her children and her ambitions for them she was satisfying her own emotional need, and this strong drive had apparently

dominated her thought and action throughout her married life. As applied to Miriam this meant that Miriam too must go through college and be a teacher, although it was in her college preparatory work that she was failing most hopelessly. It was therefore the social worker's task to help the mother see the relationship between her own emotions and the problem situations of her daughter, to make her face the reality frankly, and so to break down her determination to carry out a plan which could not be realized, substituting another which would accord with existing conditions but probably be much less spectacular and to the mother's mind less "honorable." A study of Miriam's school record showed that she had done very good work in English, composition, grammar, and spelling and also had some facility in handwork; while history, geography, sciences, and other studies that require reasoning and abstract thinking were meaningless to her. She was interested in typewriting, and except for the family expectation that she be a teacher she would have selected stenography for her occupation. In her local environment her natural ability would probably suit her for a position as routine typist or stenographer, provided no executive activities were expected. In the first interview with the girl she had indicated some willingness to change from the college preparatory to the commercial course and appeared to hesitate only because of an emotional pressure. It was also recognized that the school's attitudes were fixed and rigid and that she must either leave the school or adapt herself to the minor considerations of its disciplinary system. A rational discussion of these facts and a little persuasion gained the girl's cooperation. It was more difficult for her to accept the idea that she should not try to equal her sister's achievement, but when the situation was referred to in terms of going after equal success and happiness, but in her own way, her resistance gave place to a relieved acceptance. This also seemed to minimize her uncomfortable comparisons between herself and her sister since they were no longer placed in competition.

For the mother the acceptance of a changed status was even more difficult than for Miriam because of the strong emotions in-

volved, and might have required a long-time contact but for the fact that she was undergoing so much emotional strain at the time of the interview—serious financial worries, her younger boy's behavior, and the school crisis—that a satisfactory solution offered by someone who was in sympathy with Miriam probably came as a relief and made it easier for her to accept the facts to which she had formerly closed her eyes. In other words, circumstances had been forcing her to acknowledge her own personal inadequacy, while the contrast between the intellectual successes of the older children and Miriam's school failure and the brother's problem conduct had brought to attention again the great disparity between her husband's heritage and her own. Although she had always tacitly recognized this, she had never permitted herself to face it frankly. But when visitor had explained the meaning of the I. Q. and its implication of difference in native endowment between Miriam and her sister, and then had suggested as a goal Miriam's happiness and success in her own chosen vocation, the mother's resistances finally gave way and she experienced a relief from great anxiety in approving the suggested change. Her need for approval, which she had hoped to gain at some future time from the relatives in Europe, had been met more immediately by the approval of the mental hygiene clinic and the school. At the same time her demand for vicarious success was to be met, although not according to her original plan.

The following day a plan was made with the school by which Miriam's schedule was completely rearranged. She received credits for all high school work already completed but otherwise began at the beginning of the commercial training course. When last heard from she was adjusting well to her work, and, relieved of her feeling of inadequacy, was more at ease socially and on the road to a satisfying career.

CONCLUSION

Surveying these two cases from the point of view of the community, we find the following results of treatment: In the first case, the exceptionally fine endowment of a boy was being not only wasted but actually diverted into

mildly anti-social channels; by a reorganization of the relationship between the boy and his environment, the employment of his gifts was redirected toward high social usefulness. In the second case the advantages to the community are less obvious but real, consisting of preventing the waste of high school teaching which could not be absorbed, and the later occurrence of a vocational failure.

From the point of view of the individuals, we see in both cases two coordinated actions: the releasing of specific tensions or freeing from crippling demands, and the consequent "opportunity for growth", not only for the original "patient", but also for the others whose emotional life was most closely bound up in the problem situation.

This concept of "opportunity for growth" now is conditioning the present trends in social case work practice in family welfare, child-caring, and most other types of social agencies. Its genesis was in the mental hygiene clinic's application of psychiatric thinking to the problems of everyday life, and the consequent deeper understanding of the true nature of these problems.

Just as we expect physical growth to adult stature, and as we anticipate for the normal person intellectual development to the point of educational and vocational competency, "thinking for oneself and helping others to think", so now we have begun to look for the maturing of the emotional life as measured by social adjustment—not only in personal happiness and self-expression, but in contribution to the welfare of others. Miss Bertha Reynolds has so aptly expressed this principle in a recent publication, "Between Client and Community"¹, that a quotation seems most fitting here.

"Emotional maturity...may mean capacity to feel truly, in relation to the facts of our world and freely, without subjection to, although in relation to, the feelings of others; and also to create in our responses to others a relationship of 'feeling together' which is something different from and better than single individuals could experience alone. So little do we know about this that we have scarcely any vocabulary to talk about it. But something like this is at the basis, we are sure, of acting together, for out of common feeling

much more than from shared intellectual concepts comes the capacity to cooperate for valued ends. We know something about physical education and have begun to educate the intellect (although what we call that is too often piling up fodder which we hope, without knowing how, that the young animal will grow by chewing upon). As yet, we have not begun to think of educating people for sound, healthy, emotional life, and so, of course, we leave to chance, and mostly evil chance, because of all the distorting evil influences that surround the young, the most important education of all—preparation to live in an interdependent world as beings capable of feeling and acting together.”

¹Smith, *College Studies in Social Work*, Vol. V, No. 1, p. 119, 1934.

CASE HISTORY OF A PATIENT SUFFERING FROM AN OBSESSIONAL NEUROSIS—APPARENTLY RECOVERED

ZULPHA M. GUILFOIL*
Farnhurst, Del.

This patient was referred to the Mental Hygiene Clinic by her family physician who gave a history of patient having suffered from marked phobias regarding contraction and dissemination of infection which seriously interfered with her home and social relations.

Upon her first call at the clinic, the patient appeared apprehensive, nervous, and entirely hopeless about her condition. She cried readily, complained of smothering spells, expressed fear of typhoid germs on the furniture in her house, and said she was afraid to stay at home. She seemed completely dominated by her compulsions and obsessions.

The clinic examiner wrote her physician that there seemed no physical basis for her fears, and recommended that she should be hospitalized for a few weeks in order to remove her from her familiar surroundings so that treatment would be more effective.

The social case work study of this patient's history revealed that she had led a normal uneventful life up to within the last five years. She had always had good health although possessing a rather frail constitution. Her family history was somewhat significant. Her maternal grandfather died from cancer, as did also

her mother. Two sisters died from tuberculosis; and another sister, who had made her home with patient, following her mother's death, since she was twelve years old, was inclined to be nervous and excitable. One maternal aunt is also said to be very nervous and excitable. Patient had always had the fear that a tubercular taint ran through her family. She had cared for her mother during her illness with cancer and had always rebelled at the suffering her mother had endured.

Patient had had only a grade school education, but achieved rather high marks. She was obliged to leave school when 14 for economic reasons.

Patient married when she was 19 years old, and her marriage was ordinarily happy. Her husband was kind and indulgent to his family, worked steadily and earned a moderate salary. He did not drink, and gave patient no cause to worry or be unhappy about him. Patient had given birth to three children, all boys. The first was born in the second year of her marriage, the next three years later and the third four years. Deliveries were all normal, and she had had no miscarriages.

Patient was described as having a very pleasant, agreeable personality. She was rather quiet in her tastes, was a good housekeeper and manager, took much pleasure in her home, and had a fine appreciation of beauty and taste in the home and in her dress. She had always been inclined to accept her responsibilities too seriously. The early death of her mother made her anxious about her younger sisters' welfare, and she confessed to a feeling that she had proven inadequate in looking after them.

She appeared, however, to make a fairly happy adjustment of her life until five years before her appearance at the clinic. At that time her second son was taken ill with typhoid fever, and she nursed him through a very severe illness, during which he was bedridden for four months. His recovery was slow and she worried greatly over him. A year later her third son was taken ill with typhoid fever and he was confined to his bed for nearly four months also. She again passed through a period of great anxiety and worry. When this son became convalescent, it was noticed that

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patient was not her normal self. She lost interest in her home. Although she was still worried about her children, she grew indifferent toward them and showed them no affection. She began to depend much more upon her sister's help, making many demands on her time and gradually came to regard her as the head of the home. When she had reached this stage of development a sister died of tuberculosis, and was brought to patient's home town for funeral, although the funeral services were held elsewhere. Some relatives who had attended the funeral later called at patient's house. Their wraps were placed all in one room. Since that incident, patient has kept that room closed and forbade anyone to enter there for fear that they would come in contact with tubercular germs. Since then, and up to the time patient was brought to the clinic she had become so engulfed with her fears and phobias that they filled her content of thought, and most of her mental activity was concerned with them. Her fear of certain articles of furniture being contaminated had spread until there was only one chair in which she would sit. She had for the past six months eaten all her meals standing. She was particularly apprehensive about her chairs because she feared that outsiders when they called brought germs with them, and therefore the chairs were contaminated. She continually washed her hands with an antiseptic soap and would touch only certain articles in the house.

When first interviewed by the social worker patient talked freely about her obsessions. She said they were first established when her son became ill with typhoid fever. They were then living in a row of houses quite far from the center of town. She had disliked living there as she was aware that very "common" people had lived there and she felt socially inferior because of this. She realized, however, that this was a foolish way for her to feel when their circumstances would not permit a change. Shortly after her son fell ill she recalled that there had been a case of typhoid fever in one of the houses before. She instantly conceived the idea that the germs had been lurking about since. Here was a justification for her dislike of the house—she felt that her intuition had led to her dislike. She

clung to this belief tenaciously, but did not at that time mention it to anyone. After her son's recovery, she brooded over her discovery and tried to induce her husband to move not confiding her fears to him. He appeared satisfied and objected to making a move at this time as being impractical.

When her other son fell ill the following year, this appeared to her only a confirmation of her fears. She reproached herself for acquiescing to her husband's wishes without making it clear why she had wanted to move. She knew she had refrained from telling him her reasons for fear of being ridiculed. Now she was haunted by the fear that she would lose her child because of her cowardice. She confessed that all through his illness, she felt that if his death occurred she would be responsible. Upon his recovery, she made known her fears and while neither the doctor nor her husband agreed with her she was able to induce her husband to take another house. But moving only presented another difficulty to her mind. She had now become entirely taken up on the subject of germs. She felt sure that these germs existed in the furniture. She wanted to destroy it all and not take any of it to her new home, but again economic reasons made this impractical. She compromised by having what furniture she believed had been in direct contact with her children's illnesses stored in a shed on the place, but its presence there, after she moved, was a constant source of worry to her. She felt sure that because of this furniture, she had carried the germs to her new home. She suffered agonies thinking how easily her children could slip into this shed when she was not watching them and so become exposed.

She had always feared tuberculosis as there was a history of it in the family. She now began to feel that tubercular people should not have public funerals. She found herself panicky if she later met anyone in a store or movie who had attended such a funeral. Because of this dread she thought it was impossible for her to attend the funeral of her own sister when she died of tuberculosis. Then, to her horror, her relatives who had attended the funeral came to her house afterward. She now had another phobia to occupy her mind, and said that her life had become a horror to

her, because everywhere she looked, every article of furniture in her house seemed to be a lodging place for germs.

Patient talked about her phobias in an apologetic manner but firmly clung to her beliefs. She admitted that doctors had told her germs could not live long anywhere, but she cited her experience with typhoid fever to refute these statements.

Because her family did not share her beliefs she was alienating herself from them and becoming indifferent to looking after them. She felt her husband would not share her beliefs because of the inconvenience it would mean to him. She thought her boys came home from school untidy and dirty just to aggravate her condition. At the time of this first contact with patient the home was demoralized. Her children were not allowed any freedom in the house, could never bring any playmates there, and were constantly being admonished not to touch things or to use certain articles. Her sister's nerves were becoming over-strained because of patient's constant criticism when doing the work. Only certain cleaning cloths were to be used, only certain cooking utensils, etc. Patient's husband who had remained kindly and sympathetic towards patient, was rebuffed when he tried to induce patient to go out in the evening to a movie or other diversion. Patient herself was beginning to be affected physically. She could not eat nor sleep and began to complain of subjective symptoms. From her appearance it was obvious that she was suffering acutely from her obsessions. This is a brief portrayal of the problem presented in patient's first visit to the clinic.

After-care: The recommendation made in the clinic was carried out and patient entered the hospital a few days later. She was given a complete physical examination which proved negligible for pathology with the exception of diseased tonsils which were removed. While at the hospital, patient talked freely of her phobias, but she adapted herself well to ward routine. She very earnestly attempted to cooperate in her treatment and was sociable and friendly. She did not appear to be afraid of any germs in the hospital but she still persisted in washing her hands very frequently. She was paroled from the hospital after a

month's treatment, and although her phobias were still existent she was less morbid about her condition, quite cheerful, and anxious to return home, for her separation from her family appeared to reawaken her responsibility toward them.

After her return home, patient was called upon frequently by a social worker. She was most cooperative in these visits and anxious to have someone call. She was always truthful with the social worker and discussed her condition with her frankly. From the beginning of these visits, it was evident that patient was still obsessed with her germ theory, but at first, patient tried to rationalize her fears and made rather a definite attempt to overcome them, but on each visit it was apparent that she was succumbing more and more to them, and in six months her condition was again as aggravated as when she first came to the clinic.

From time to time she was visited by a psychiatrist as she could not be induced to come to the clinic for fear of acquiring some new infection. Improvement was apparent after these calls but the effect was only transitory. Patient insisted that if she could only move into another house without any of her old furniture she believed that she could overcome her obsessions. This move was finally made. The new house was thoroughly renovated, freshly painted and papered, new furniture was bought and any old articles retained were fumigated. When patient moved into the new house she expressed great satisfaction and said she had no fears of further infection in the home; but shortly afterward patient again began to develop her old obsessions. She felt she could not keep the house free from germs because she could not keep people from coming there. If any caller sat on any of the new living-room furniture, that piece became unfit for the family to use.

At intervals, patient's condition would begin to improve. She would make sporadic attempts of going out and trying to mingle among groups of people. She would occasionally go to the movies with her husband. She would take more interest in her home and would again perform her household duties, but always some incident would occur that would interfere with her attempts to adjust.

After each failure to overcome her obsessions, patient's condition would recede a little further, and it would take much longer for her to regain some semblance of a normal outlook. The anxiety state patient was in was having a distinct effect upon her health. She became very nervous, listless, and could not sleep without sedatives.

After successive regressions and progressions patient began to wholly give herself up to her phobias, and it was then thought advisable to return her to the hospital for a prolonged stay, and she was readmitted four years after her first admission.

She remained in the hospital receiving intensive treatment for eighteen months. Her response was very slow and gradual but she was always accessible and would always talk freely about her obsessions. During her hospital stay many of these were dispelled. Her fear of going to the movies or other entertainment in the hospital was finally overcome until she was ready and eager to attend the entertainments given. She was finally allowed to go home for week-ends where her gradual improvement was noted. She became anxious to return home permanently until she was finally allowed to do so.

Patient appears to be very happy at home again. She has confided to the social worker that she no longer fears germs or any other infection in her home. She admits her entire attitude towards her family has changed. She no longer worries about her boys coming in soiled from their play or untidy in their appearance. She enjoys having people come to visit her and is doing all her own work. She feels sure her recovery is due to her prolonged stay in the hospital and the wise treatment given her there. She learned to recognize the sources from which her obsession rose. She realizes that her mind was receptive to these ideas because she was worn out physically and mentally, and that the primary cause of them was probably due, in the first place, to a sense of inadequacy and inferiority that had crept into her consciousness when she could not maintain a standard of living that she felt desirable. Recognizing these facts, she now has a sound basis on which to build up her mental health. She understands now that she must guard

against the entry of such thoughts and to prevent their lodgement for a moment in her consciousness. She learned one essential lesson at the hospital and that was to fight these obsessions at their inception and she is now willing to fight because she has been given the strength physically and mentally to do so. She declares she is now looking forward with anticipation to life whereas before she was longing only for death to free her from her difficulties.

MISCELLANEOUS

Life Expectancy In Coronary Thrombosis

Fredrick A. Willius, Rochester, Minn. (*Journal A. M. A.*, May 30, 1936), obtained information regarding 370 patients who had coronary thrombosis and who lived from a few minutes to seventeen years. In 71.9 per cent the thrombosis occurred when the patients were between the ages of 50 and 70 years. No patients were less than 30 years of age, the incidence in the fourth decade of life was 1.6 per cent, while 17 per cent of the patients were in the fifth decade. There was a great predominance of males over females; the ratio was 7:1. Solitary coronary occlusion occurred in 80.3 per cent of the cases; two episodes occurred in 17 per cent, three attacks in 2.2 per cent, and four episodes in 0.5 per cent of the cases. Death directly attributable to the heart occurred in 51.6 per cent of the cases, while other diseases such as pneumonia, cancer and nephritis accounted for the death of 2.7 per cent of patients. The patients surviving at the conclusion of the study comprised 45.7 per cent of the group. Of the cardiac deaths 36.6 per cent were ascribable to coronary thrombosis; gradual cardiac failure accounted for 51.9 per cent, and sudden death of uncertain mechanism for 11.5 per cent. While the incidence of females was relatively small (12.4 per cent), their cardiac death rate was considerably greater than among males; females 63 per cent and males 50 per cent. There was no correlation between the duration of pain in coronary thrombosis and death or survival. The cardiac death rate increased progressively with recurrent coronary thrombosis. Among cases of solitary coronary occlusion the cardiac mor-

tality was 47.5 per cent, among cases in which there were two attacks 69.8 per cent, and among those in which three attacks occurred 75 per cent. The patients living at the conclusion of the study comprised 45.7 per cent of the group. Of these, 42.6 per cent reported themselves to be in good health, 23.1 per cent were well while living a restricted life, 28.9 per cent had recurrent anginal attacks, 3.6 per cent had congestive heart failure, and 1.8 per cent had had cerebral vascular accidents.

Effect of Alcohol on Digestion by Gastric Juice, Trypsin and Pancreatin

Since it has been suggested that there was a deficient assimilation of food or a disturbed gastro-intestinal function in alcoholic polyneuritis, it appeared of value to Harry Blotner, Boston (*Journal A. M. A.*, June 6, 1936), to study this problem by determining the effect of alcohol on digestion by gastric juice, trypsin and pancreatin. Specimens of gastric juice were obtained from a variety of non-alcoholic patients and the amount of free hydrochloric acid was determined. Each specimen was divided into two equal parts of about 10 cc. Pieces of egg albumin, which were coagulated by heating, were added to one part of gastric juice to serve as a control test. Then 10 cc. of 48 per cent alcohol and egg albumin were added to the second part. These were incubated at 37 C. and the amount of digestion was noted in six, twenty-four and forty-eight hours. Similar tests were made with commercial powdered trypsin and pancreatin. In the control tests with the different specimens of gastric juice there was a varying amount of digestion of the egg albumin at the end of six, twenty-four and forty-eight hours and it increased as time went on. The digestion was most marked in those specimens of gastric juice in which the free hydrochloric acid was as high as 80 and least when the free hydrochloric acid was 0. In the tests with alcohol there was practically no digestion of the egg albumin even at the end of forty-eight hours. The tests were repeated by incubating alcohol and gastric juice for fifteen minutes. The alcohol in this mixture was evaporated off in vacuo at 37 C. Then egg albumin was added to the remaining gastric juice and

the amount of digestion was noted. In these tests also there was no digestion of the albumin. The results suggested that alcohol destroyed the enzymes in the gastric juice. After the egg albumin was added to the trypsin mixture there was usually marked digestion within six hours and practically complete digestion in twenty-four hours. In contrast, when alcohol was added to the trypsin there was almost no digestion even at the end of forty-eight hours. The results with pancreatin were similar to those obtained with trypsin, although pancreatin did not produce as much digestion as trypsin. However, when alcohol was added to the pancreatin there was no digestion of albumin during the period of observation. It is apparent from the results obtained that a sufficient amount of alcohol inhibits the proteolytic activity of certain gastro-intestinal enzymes. In considering the chronic alcoholic patient with polyneuritis or deficiency disease, it would appear that the large quantities of liquor taken over a long period of time destroys digestive enzymes and thus prevents the proper digestion and assimilation of food. Consequently, a deficiency disease is produced.

Epithelioma of Skin of Bridge of Nose

Milton Friedman and Jerome Engel, New York (*Journal A. M. A.*, May 30, 1936), treated their case of extensive basal cell epithelioma of the skin originating at the inner canthus of the eye and bridge of the nose with massive doses of low voltage roentgen rays. They followed Widmann's suggestions, which entail the administration of single weekly doses of 2,500 roentgens (measured in air) or 1,500 roentgens, depending on whether the lesion is a bulky, spherical mass or a relatively flat indurated ulceration, except that their unit dose is larger. The interval of one week or more between treatments allows sufficient time for response to the irradiation. Thus the subsequent treatment may be planned for a smaller lesion, permitting more careful protection of the surrounding normal tissues, from which the growth has receded. After the first three treatments have been delivered in the first two weeks, it seems wise to wait for two or three weeks before resuming further

therapy in order to get the full cumulative effect of the early treatments.

A feature of this technic is that there is little tendency for the remaining tumor cells to become radiation fast. Their treatments were given in units of ten skin erythema doses, or 4,000 roentgens (measured in air). This does not accurately express the dose delivered because, with the progressive shrinkage in the size of the portal used, the slight decrease in backscattering depreciates the amount of radiation that reaches the tissues. This technic is ideally suited for noninfiltrating lesions such as basal cell epitheliomas.

OBITUARY

JAMES MARTIN, M. D.

Dr. James Martin, a practicing physician of Magnolia for many years, but incapacitated for several years due to illness, died at his home on May 25, 1936, at the age of 69 years. Dr. Martin graduated in medicine at the Medico-Chirurgical College, Philadelphia, in 1893, and his entire professional career was lived in and around Magnolia.

Dr. Martin was county treasurer for Kent county from 1912 until 1916. He was elected for two terms of two years each.

Dr. Martin's wife died on December 9, 1935, while a daughter died December 19, 1935. He is survived by a brother, Frank Martin, of Dover, and a sister, Mrs. Mary Dodd, Rehoboth.

Funeral services were held on May 27, 1936, with interment at Barratt's Chapel.

BOOK REVIEWS

Practical Clinical Psychiatry. By Edward A. Strecker, M. D., Professor of Psychiatry, University of Pennsylvania, and Franklin G. Ebaugh, M. D., Professor of Psychiatry, University of Colorado. Fourth edition. Pp. 705, with 60 illustrations. Fabrikoid. Price \$5.00. Philadelphia: P. Blakiston's Son and Company, 1935.

This book will be of primary interest to the general practitioner. Psychiatry has formerly been considered a highly specialized subject with which the average physician had little if anything to do. The necessity of a more complete knowledge of the specialty is now recognized and the medical man is finding it essential to know the foundations. It would seem that this book supplies the text which is necessary for the non-specialist to

orientate himself in this field. Each type of reaction is discussed clearly and concisely with brief descriptions of each condition as regards etiology, pathology, symptomatology, diagnosis, and treatment. The main portion of the text consists of case descriptions and shows the patient as he is seen by the physician, showing the variations from the average text book description. There is also a special chapter on the Psychopathological Problems of Childhood by Leo Kamer, M. D., Associate Professor of Psychiatry at Johns Hopkins University.

The book can be well recommended for any person who is interested in becoming familiar with the general principles of psychiatry without entering into the detailed descriptions found in the average text book.

Behavior Development in Infants: A Survey of the Literature on Prenatal and Postnatal Activity—1920-1934. By Evelyn Dewey. Pp. 321. Price, \$3.50. New York: Columbia University Press, 1935.

This book, which is published for the Josiah Macy, Jr. Foundation, will be of most interest to the psychologist, the physiologist, and those who deal with the reactions of infants. It is as stated, a review of recent literature. The author does not enter into any controversy when such occurs between the investigators whose work she discusses except for occasional comment as to the adequacy or inadequacy of the material offered. The material is exceptionally well organized and is clearly presented without the confusion which is often encountered in surveys of literature. The reactions of the fetus, the neonatal period and infancy from the gross divisions, although there is no sudden change from one period to the next. The sensory reactions of the fetus are discussed with the difficulty encountered in conducting experiments because of the lack of sufficient material. The neonatal period is comprised mostly of discussions of the presence and development of the various sensory reactions while the period of infancy deals with the more complicated and coordinated reactions. The author feels that the tendency in literature is to discard the behavioristic theories and accept the teaching of the Gestalt School.

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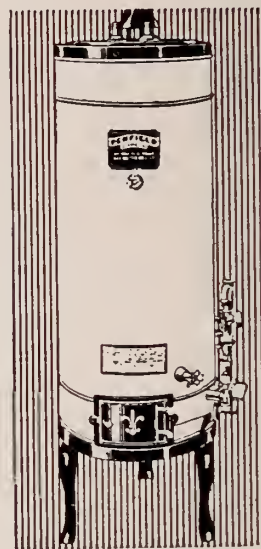
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I. VITAMIN C

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However, it remained for modern biochemical science to establish the chemical identity of this antiscorbutic factor. Vitamin C is now known to be identical with cevitamic acid (levo-ascorbic acid) and is as yet the only vitamin to be synthesized in the laboratory (3).

There would appear to be no valid reason why scurvy should ever constitute a serious threat to the health of the average American

infant or adult. Development of refrigerated transportation for raw foods and improvements in modern methods of food preservation, specifically canning methods, make available to the consumer during the entire year a large variety of foods possessed of valuable vitamin C contents. In addition, the modern trend towards education of the layman, in regard to the vitamin C requirements of both the infant and the adult, should also assist in complete eradication of infantile and adult scurvy from America.

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(1) Vitamins: A Survey of Present Knowledge. Page 187. Medical Research Council, Special Report 167. 1932. His Majesty's Stationery Office, London.

(2) Vitamins in Theory and Practice. Page 86, L. J. Harris. 1935. Macmillan, New York.
(3) 1935 J. Chem. Soc. 236, 1412.

(4) 1930 J. Home Econ. 25, 588.
(5) 1935 Amer. Jour. Pub. Health, 25, 1340.
(6) 1938 Ind. Eng. Chem., 25, 682.

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* Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154

** Proc. Soc. Exp. Biol. and Med., 1934, 32, 241-245

N. Y. State Jour. Med., Vol. 35, No. 11, 590

Arch. Otolaryngology, March 1936, Vol. 23, No. 3, 306-309

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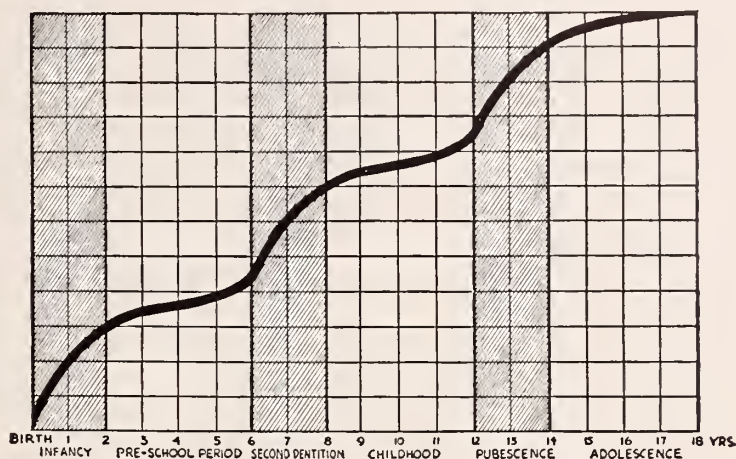
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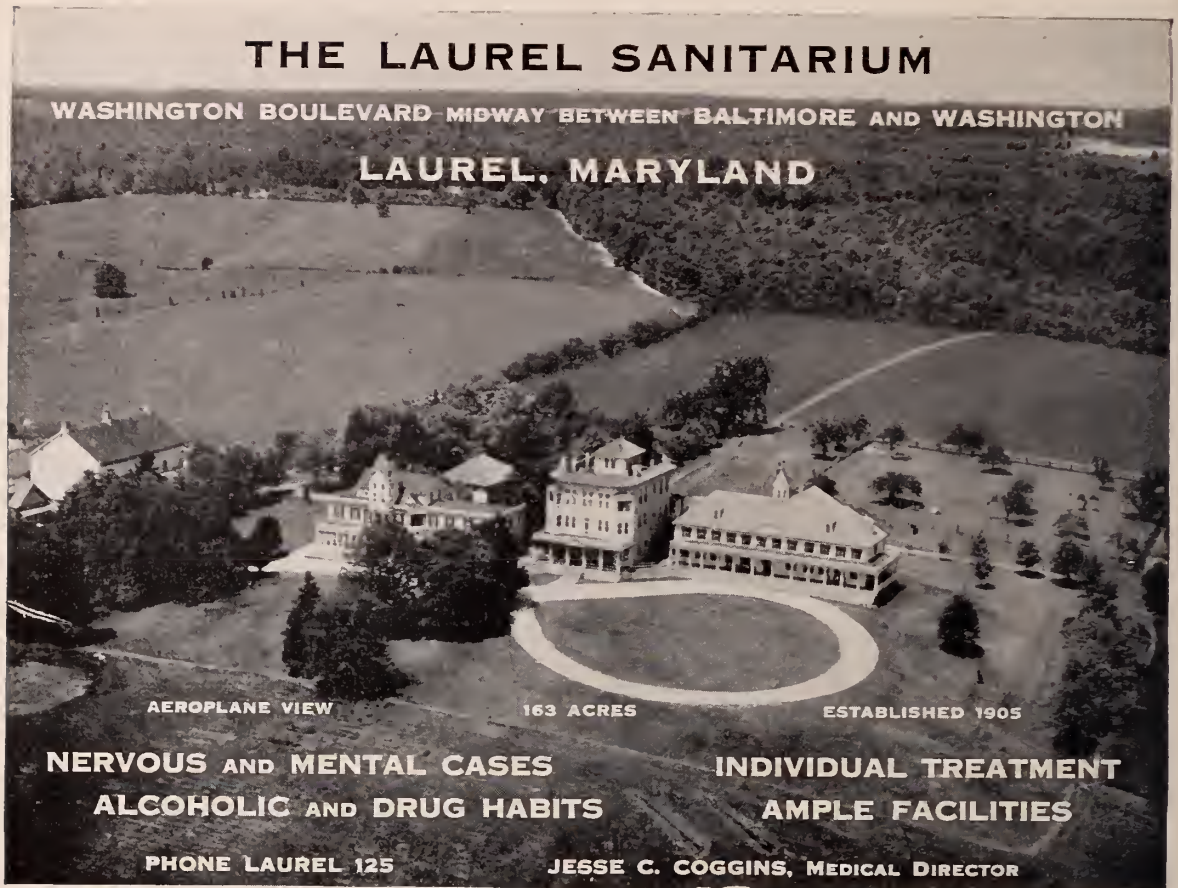
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FETAL MORTALITY IN RELATION TO TYPES OF DELIVERY*

NORRIS W. VAUX, M. D.**

Philadelphia, Pa.

In the practice of obstetrics, if we would analyze our end-results in relation to the fetal mortality without any specific thoughts in mind, we would find ourselves in a more or less hopeless and confused quandary, with nothing tangible to guide us in forming an opinion as to what method or procedure secures the best results for both the mother and her child.

I shall put before you the findings and complete analysis of the infant mortality occurring on my service at the Philadelphia Lying-In Hospital in five thousand, six hundred and fifty-five deliveries over a period of five years, mindful that I am in no way setting the results before you as commendatory, but rather the reverse; my interest being to bring to light what happens to the infant—ante-partum, intra-partum, and post-partum—in a large maternity hospital. Comparisons under like circumstances are within themselves odious and useless, as types of patients, locality and methods of treatment differ so in the minds and practice of other maternity hospitals and individuals throughout this country.

Constructive criticism is always of greatest benefit and very helpful to those who are ever striving to better the existing conditions. On the other hand, criticism is often freely given by those who have no idea of what their own work and results are yielding and the usual accompanying guesswork only befores the issue.

In order to be more fully acquainted with the fetal mortality results in our department,

it was my pleasure to collect, analyze and review the work here presented. Let me here thank Dr. Tyson and his pediatric staff, and Miss Hanlon, the statistician, for their painstaking and thoroughly diligent work and their helpfulness in compiling and allowing me to present some of this material. There was no thought in my mind when this work was undertaken that it could be utilized in any way to prove any special or specific thing. Much to my surprise, after this material was collected, correlated and tabulated, I found that many valuable and instructive facts were brought to light. As I have previously stated, it is unfair to compare certain hospital results with another in the same locality or elsewhere, and it is not my purpose to show the good or the bad results of another institution, but the results here presented are simply given as a basis of comparison.

Neither is it my purpose to advocate any specific method of practice or method of delivery, but in no uncertain terms to set forth and compare that which in our hands has proved to be the better method of handling the labor, and the end-results of those cases coming under our guidance; to formulate and systematize the methods which we have found to give the best results in this fetal mortality survey. There is no doubt in my mind that some of those present will not agree with me on the recommendations that I might make, yet I have positively proved to myself that our, at times, so-called radical procedure of handling our cases is as efficient as the more conservative methods used by others, and until some quite definite and different results are brought forth to show their incorrectness, I shall continue to carry out that which, although radical, has given us the best results in the interest of the mother and her expectant child. After all, the baby plays a large

*Read before the Medical Society of Delaware, Wilmington, October 8, 1935.

**Clinical Professor of Obstetrics, Jefferson Medical College.

part in obstetrical work, and at times the importance of the safe conduct of the infant into the world is disregarded. We must, however, bear in mind that fetal mortality is of equal importance as maternal mortality. This fact must be emphasized if obstetrical practice is to hold its place and advance, as it rightly deserves, in the practice of medical art.

If I were given, therefore, to making a plea to my obstetrical confreres, that which I should emphasize would be a much more radical step in advance towards operative obstetrics, particularly in well run maternity hospitals, and to leave the decadent art of midwifery for the general practitioner to carry out in the homes. The specialty of operative obstetrics has come to stay, and it is our duty to emphasize this fact to trustees of medical schools, to faculties, and general medical practitioners alike, and insist upon at least an equal standing in the curriculum, on hours devoted to surgery, medicine, and obstetrics and gynecology, and that post-graduate instruction in specialties be compulsory in properly equipped and staffed institutions before individuals be permitted to wander ruthlessly into the field of operative procedures in obstetrics.

It has always been the purpose of the Philadelphia Lying-In and Maternity Department of the Pennsylvania Hospital to fulfill our professional obligation to private and ward cases alike, and it is generally accepted and practiced with few exceptions. Private patients are delivered operatively, so likewise are our ward cases. This then, accounts for the large number of operative deliveries, and I shall now take you more fully into detail of the statistical results relative to the baby, over this five-year period:

(Large series of graphs and statistical tables then shown).

The conclusions drawn from this review are:—

1. That a more full and detailed prenatal study of the causes of pre-maturity be undertaken and methods found to combat the high fetal mortality.

2. That the more radical procedure of operative interference and delivery in well equipped maternities, in trained hands, is justifiable.

3. That all breech cases be delivered operatively by decomposition and extraction as soon as the first stage of labor is completed, and that all large breech babies with questionable disproportion in primiparae be submitted to Caesarean section.

4. That the fetal mortality be looked upon with equal importance as the maternal mortality.

5. That only through more special training and more intensive studies of pelvic disproportion and the toxemias of pregnancy can we hope to bring about more radical methods of dealing with the abnormalities of childbirth. That in the end-results the more radical procedures in competent hands and in properly staffed maternity hospitals have given a safer and better method for handling the complications of obstetric abnormalities.

6. That maternity cases, especially the toxemias and premature labors, should be given a very much greater share of study, in particular the placental histology and chemistry, and that the endocrine system be more fully investigated during the course of gestation.

7. That lastly, this review and analysis of fetal mortality in relation to methods of delivery offers a prospective mother a better chance for herself and baby in labor and delivery by intelligent operative intervention in lieu of the older and time-worn method of masterly inactivity.

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DISCUSSION

PRESIDENT NILES: You have heard this lengthy oration on obstetrical statistics. It has been very interesting indeed and rare in quality. I would like to hear some discussion.

DR. EARL BELL (Wilmington): Mr. President, I certainly want to thank Dr. Vaux for this wonderful paper. It brings a lot of subjects in maternity work to the fore which should be very valuable.

There is just one point that I wanted to mention. In reading these statistics it seemed that delivery was more safe in certain cases provided the membranes ruptured before labor started. When I went to college they taught me that the membranes should never rupture until after labor got started. I

wanted to ask Dr. Vaux if I had read these statistics correctly.

DR. PAUL R. SMITH (Wilmington): I enjoyed Dr. Vaux's paper very much, but I can't agree with him when he says that fetal mortality is as important as maternal mortality. These statistics came out a little faster than I could digest them.

DR. L. J. RIGNEY (Wilmington): Dr. Vaux, we enjoyed this paper very much, and anyone who has attempted to compile any statistics can appreciate that it has been a huge amount of work.

The impression it made upon me was that forceps delivery is very beneficial. Of course I am one of the younger men and I have been taught along those lines, that forceps delivery is beneficial in certain cases. In doing spinal punctures on a great many babies delivered both with forceps and spontaneously in this series of cases it was found there was bloody spinal fluid more frequently in spontaneous delivery cases.

I also was impressed by the fact that women delivered with episiotomy were in better shape than those who had not received episiotomy. If I understood correctly, it showed that women with second degree tears were in better shape than those with only first degree tears. I think that shows that episiotomy should be done in nearly all primiparae cases.

DR. EDWARD BOHAN (Wilmington): This certainly is a very splendid paper, and a very fine piece of work from the statistical viewpoint.

I would like to ask Dr. Vaux only one question, I do not see how you can judge fetal mortality without judging maternal mortality at the same time, and maternal morbidity. You may get a splendid fetal mortality and a poor maternal mortality. I would like Dr. Vaux to bring out a comparison which would show that the maternal mortality and morbidity has improved with the improvement in fetal mortality.

PRESIDENT NILES: Is there any other discussion of this paper? Dr. Vaux, will you close the discussion?

DR. VAUX: I would very much like to answer the query of Dr. Bell as far as the rupture of membranes is concerned before the

onset of labor and those that were not ruptured before the onset of labor. The fetal mortality was far better, there were less babies died, less intracranial injury, less abnormalities of babies where the membranes were ruptured before the onset of labor. Absolutely I was taught the same as he was, but we found it to be different.

The fetal mortality that Dr. Smith talked about, he didn't exactly see why we put fetal mortality on the same basis as maternal mortality. Doctor, I did it for the reason that I believe the teaching of the younger men, and from the standpoint of the individual, of course, to lose a mother is a very tragic thing, but nevertheless that mother considers her baby a very important part of her pregnancy, and we are making every effort that we can to try to get the fetal mortality lower and also to keep the maternal mortality down.

I would like to state in answer to Dr. Bohan's question, the fetal mortality is 2.4%; the maternal is 0.6%. Now, the corrected results with episiotomy are far superior for both baby and mother with episiotomy than without, as I tried to show you in the slides.

I am sorry, there is a great deal of statistical work in the paper and I know it is boring, and it is hardly possible to get this thing without a more direct study of the charts themselves.

I agree again with Dr. Bohan that the maternal mortality should go along with the maternal morbidity and the fetal mortality. It is too large a subject to bring all in one paper. We made a survey for a period of three years of maternal mortality and morbidity. I am sorry to say the morbidity runs around 19 per cent. The temperature is taken twice in every twenty-four hours while she is in the hospital. That is a rather high morbidity.

We do not find the morbidity in this series to be any greater in the operative deliveries than it was in the spontaneous: they were about equal. However, they were slightly in favor of the operative deliveries over the spontaneous.

I think that is all and I thank you very much for asking me to come down and address you.

DR. BELL: I thought I asked Dr. Vaux why. I don't suppose I did, but I meant to. If I read the statistics right, and he says I do, why does he have less deaths with rupture before than he does with rupture after the onset of labor, and if this is all true, why wouldn't it be advisable then to rupture the membranes a day or two prior to the expected date of primipara?

DR. VAUX: I can answer that question of Dr. Bell's only in this way—that we do it very much more frequently than we used to. I can't explain the reason why, but we never do it if it is a question of any disproportion or abnormality. We only do it when it is easy to do it without infecting the individual through the vaginal tract, and it is done easily with a puncture by forceps, not with cutting instruments, when the cervix is two fingers dilated; the membranes are ruptured and the patient kept non-ambulatory and in bed. Our fetal mortality is less in that division, but I can't tell you why.

CERTAIN PHASES OF ACUTE OTITIS MEDIA*

CHARLES P. WHITE, M. D.**
Wilmington, Del.

It is my desire to discuss with you today the matter of acute otitis media, acute middle ear disease, a subject which is not new, I am willing to admit, but it has been selected for the reason that almost every doctor comes in contact with acute otitis media sooner or later, and sometimes it is not so easy to handle. You all know the etiology, symptomatology, prognosis and course of acute otitis media, and its liability at times to terminate in mastoiditis, and it is not my idea to consider these in detail, but rather to take up certain phases or angles of this disease.

The first of these is the matter of paracentesis, and the question I shall put before you is: Shall we open every ear drum in acute otitis media? Where we have an ear drum that is swollen and reddened, with pain and temperature, and this pain and temperature cannot be referred to anything else, I should say these cases justify opening. And this

brings up the query: what are the dangers of paracentesis? Referring to the books, you will find described that condition where there is no floor to the middle ear cavity, or where there is a partially absent floor due to a dehiscence in the bone, and through this absent or partially absent floor there may be a protrusion of the jugular bulb into the middle ear cavity, and it is possible that an unlucky operator, about to do a paracentesis, might plunge his knife into the bulb, and have a severe or serious hemorrhage. I have never had such an experience, and I hope that none of my colleagues have, for it is possible that while such a hemorrhage might be controlled by packing the ear canal, it is just as likely that it might not be easily controlled; and, anyhow, I would rather discuss it in the abstract here than have to do with it in reality. If any of my colleagues listening have had such an experience, I would be glad to hear. The literature shows these cases to be quite rare.

And what are the other dangers of paracentesis? None, or very little, so far as I know, provided we do the operation carefully, yet I heard Dr. Kopetsky, a noted ear doctor of New York, say some years ago that he who did a paracentesis before the right time had arrived, rather did more harm than he did good. But the question I put before us was: Shall we open every ear drum in acute otitis media? Perhaps I can better explain what I have in mind by reciting one or two experiences.

Some time back I received a message over the phone to go to house so-and-so and open the ear drums of the patient I would find there. Arriving at the house I found that the patient was a little girl, about six years of age, convalescing from the measles, temperature about 100, with two somewhat swollen and reddened ear drums, but not uncomfortable. I made three visits to the house, at the expiration of which time the ears had cleared up and neither had to be opened. The reasons for not opening these ear drums, in spite of the message which sent me there originally, were the fact that the child was not uncomfortable and the redness seemed to indicate a receding otitis media.

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In another case I arrived at the house about ten p. m. and found there the father, mother and doctor, and examining the ears of the child, who was apparently very sick, my opinion was that it would not be wise to open the ear drums, and looking again, I maintained this position; whereupon the rest of the history was given me, which was, that the celebrated Philadelphia children's specialist who had seen the child that afternoon previously had stated that there was trouble with the ears, and he suggested that the ear drums be opened, and volunteered to do it himself, if agreeable. The Wilmington doctor disagreed with this, and my position in the case was to help settle this point. The child, as a matter of fact, had pneumonia, neither ear drum opened, and the child is alive and well. In this case, while the ear drums were swollen, the redness was not of such a character that the ear drums should have been opened, in my opinion.

In other words, paracentesis, as I see it, is usually attended only by the best results, but there are border-line cases, so to speak, where we can sometimes hesitate with advantage.

The ear drum having opened, either spontaneously or by paracentesis, we will have the condition of acute suppurative otitis media, and it is my custom to have the patient remain in bed for a few days, believing that the practice of sending the child too soon to school is prejudicial. My experience shows that it is best to have no plug whatsoever in the ear canal. No cotton plug, in my judgment, is to be thought of, and the gauze wick which it was my custom once to use has been discarded also, having experienced difficulty in having it applied to my satisfaction. The pus, in this condition of acute suppurative otitis media, like pus anywhere else, should be given the freest egress possible. Aspirin is given for what pain may still persist, for any stronger sedative might obscure the symptoms. Also, particularly if there is any question, it is wise to have a smear made to determine the micro-organism present.

As to the cleaning out of the ear canal, there are, as you know, differences of opinion, some claiming that the ear should always be dry cleaned, others claiming that syringing is as good as anything else, while others say to

put drugs into the ear canal in acute suppurative otitis media is merely to dilute the pus; but my own thought is that no one method suits all cases. Some can be dry cleaned with advantage, but for the generality of my cases gentle syringing with a boric solution gives as good results as any. Sometimes, nowadays, I use methaphen solution, having discarded argyrol and mercurochrome, because argyrol has a tendency to blacken the ear canal, while mercurochrome stains the canal red, both of which, to my mind, tend to confuse.

There comes a time when we wonder whether we are still dealing with suppurative otitis media, or whether we have mastoiditis confronting us, and in this transitional stage, if I may coin that term, it is my custom to give special attention to what is called the posterior superior angle. A bulging of this angle, I read in some book, was called an "almost pathognomonic sign," and this is about as I regard it. It is not to be thought that because there is no bulging in of the posterior superior angle that there is no mastoiditis, for this would be incorrect, for there may be an inflammation in the cells at the tip, in which event there might be no bulging; but, where there is such a bulging in a case of otitis media, it is, in my experience, worthy of our close attention.

At times, in spite of the best we can do, mastoiditis will come along. You all know the symptoms of mastoiditis, and it is not my idea to enter into any detailed consideration of it, but rather to discuss with you two angles, which are, first, the classical symptoms of mastoiditis, and, second, what kind of operation shall we do in acute mastoiditis.

The so-called classical symptoms of mastoiditis, as you know, are redness, swelling and tenderness behind the auricle, which often will somewhat protrude. These so-called classical symptoms are quite all right when they are present, but we are to remember that mastoiditis may come and the patient may go into the beyond and no classical symptoms ever put in an appearance. To wait for them, in other words, is sometimes to wait too long.

And, as to the kind of operation to be done in acute mastoiditis, the answer is: the most complete, simple mastoid operation possible. The cleaning out process should go as far to

the top as you can, avoiding, if possible, the opening of the brain cavity; but if the meninges do happen to protrude, this is no great matter, provided we are careful. We should go to the tip, remembering that the facial nerve is close by; we should go back to the lateral sinus, again remembering that sometimes it is not so far back; we should open the antrum, so as to have the best possible drainage; and we should thoroughly clean out the floor. We should clean out all the cells, whether bad or apparently good, because, after operation, if we do this, the chances are we will not be harassed by fluctuations of temperature; we will not have a tender mastoid, even after healing, sometimes necessitating another operation; and we will not have facial palsy, i. e., unless we actually injure the nerve. I have seen on two occasions facial palsy following mastoid operation, when there was no injury to the facial nerve, and if we should come in contact with facial palsy, following mastoid operation, we should, as soon as possible, after the operation and before the reactions of degeneration have set in, have the face electrically tested; and in all probability, it will be found that the nerve responds, in which event another operation is indicated to more thoroughly clean out the operative field, the trouble with the nerve being the edema or swelling caused by the cells left behind, and we will probably have the satisfaction of seeing the palsy disappear.

The last angle of acute otitis media to which we will refer is the matter of deafness. Deafness in the adult is often an economic problem and we can recall individuals whose usefulness to themselves and to the community in general would have been greater if their hearing would have been better. For many such individuals treatment is of no avail, and the world is awaiting better hearing devices. Otologists are agreed, I think, that a certain percentage of these deafnesses of later life are due to the ear infections of childhood and this furnishes another reason, a most important reason, why we should give cases of acute otitis media our most careful attention.

DISCUSSION

DR. W. O. LAMOTTE: (Wilmington): Dr. White asked me to discuss his paper. I hope nobody here will think or feel that I am dogmatic.

I am glad Dr. White has emphasized caution in opening drums and operating for mastoiditis. If we were discussing this subject in a remote country region where the physician has to do everything, I would say to him when in doubt incise the drum, and treat the nose and throat, and perhaps also if in doubt open the mastoid. Most cases of purulent otitis media can be cured without mastoid operation. The nose and throat and tubes have to be cared for before many of these cases will become dry. I could cite many instances. In fact ears following mastoidectomies may not become dry unless focal infection in Waldeyer's ring have been removed. I have seen mastoid cases continue to discharge pus through the mastoid incision until small, embedded, infected tonsils were removed, when these openings promptly healed and the middle ears became dry. I venture the assertion that generally speaking when one does a great many mastoidectomies either patients have been neglected before operation or the operator has operated at times when it was not necessary. However, it is not always necessary for a frank case of mastoiditis to be present for an operation to be indicated.

If I have a case with a pneumococcic middle ear infection, the most treacherous organism in that locality, I am always concerned. There are, of course, cases that result seriously, and sometimes fatally, no matter in whose hands the patient has been even from the very beginning. It is better, as a rule, to wait until the infection has been localized and the body has had a chance to form some immunity before operating, as complications are less liable to result and the post-operative course will most likely be shortened, healing sometimes in as short a time as two weeks. I think I could prove that if necessary and time permitted.

I am just going to mention a few conditions about which some of us can easily be mistaken, even otologists sometimes, who have had considerable experience.

I think I have seen perifolliculitis or purulent infection in the external auditory canal which resembles very much acute mastoiditis. I have seen what was probably allergy with swollen canal, red drum, auricular displacement, and postauricular edema, diagnosed and insisted upon as mastoiditis and operation advised by the pediatrician but which disappeared in twenty-four hours. Do not put too much dependence in x-rays of the mastoid. My experience is that their reports mislead as often as they aid. That does not pertain alone to Delaware, either.

Last December a little girl, two years and eleven months old, was to have a mastoid operation in Connecticut the next day, indications being based entirely on x-ray report. She was brought to Wilmington that day. I inquired who the x-ray man was and they said he was an able man, that he had been assistant to Dr. Law in New York. We have Dr. Law's work here on x-ray of the mastoid. It is a pretty expensive book, and being in our library I hope somebody has made use of it. She was brought to Wilmington with no symptoms or signs of mastoiditis except the picture, and the picture looked like the mastoid was involved. The first picture that was taken here was blurred, but it was observed that the child moved slightly. Another picture was taken and the child was watched very carefully, and the mastoid cells were perfectly clear. In about five days the ear was dry and healed, and the child has not had any more trouble since. That was last December.

Dr. White is correct, too, in saying that when a mastoid operation has to be done it should be done thoroughly and the bony spicules and rough places cleaned off around the bony ridge, leaving a nice, clean surface.

Dr. White has given us sound advice, and his presentation has been very appropriate for a general gathering of physicians such as we have here. It seemed to me that it would be a good thing also to remind ourselves at this time of some of the things that delay or prevent good results.

DR. A. J. STRIKOL (Wilmington): I have had the pleasure of working with Dr. White for a number of years in the dispensaries, as

well as assisting him in private work, and I have always found Dr. White honest, conscientious and ethical with his patients as well as with his fellow practitioner. He does not have anything to sell, any new stunts or new treatments, but common horse sense. I have always found him to have that, and when I have been in trouble I have asked Dr. White to help or to give his valuable assistance.

As far as the ear conditions are concerned, I agree with most of them. Of course there is a little difference of opinion when it comes to paracentesis, as Dr. White has said. He states that almost every doctor comes in contact with acute middle ear conditions. No doubt. In fact, many of them are not diagnosed because the doctor fails to look at it. It is very easily diagnosed, and after the diagnosis is made the question is, should a paracentesis be made or not?

I can answer best by quoting Dr. Paige, of the Manhattan Eye, Ear, Nose and Throat Hospital, and he states that there are three times as many mastoids performed after spontaneous rupture than after paracentesis. Three times as many. There is no question but that when you have an abscess, no matter where it is, you must establish drainage, and the sooner you establish drainage the sooner the patient will benefit from it.

As far as the after-treatment, or the classical signs of mastoiditis, and so forth, are concerned, nothing our textbooks describe will help you out. It is a clinical experience. It is a thing that is absolutely necessary.

As for cleaning out the mastoid, the cleaner the better, as Dr. White said. We must clean it. We must not be satisfied, especially the men who profess to specialize in ear and mastoid surgery, must not be satisfied with only removing the cortex and curetting a few cells and letting it go at that. It certainly is not just to the patient or the doctor who has referred the patient to us. The cleaner the better, and you will preserve the hearing if you do that.

DR. I. W. MAYERBERG (Dover): Mr. President and Gentlemen: Dr. White has brought out some very important points today from a practical standpoint. We always know when we hear Dr. White that we are going to hear

something worth while. He has proven that again today.

I have dropped from my vocabulary the term "paracentesis" in ear work because "paracentesis" implies a puncture. I much prefer the term "myringotomy," which Dr. White mentioned in his talk, because "myringotomy" means a clear incision of the tympanic membrane. By a free incision I mean one extending from the upper part of Shrapnell's membrane, following a curved route around the posterior walls, and ending at a point opposite the beginning of the incision.

The time to perform the myringotomy should be left to the judgment of the otologist. I say that, I think, advisedly, because some of you men call in otologists. Sometimes we have symptoms of pain, sometimes of temperature, and we think something should be done. I want to caution you not to stampede the otologist into opening a drum that possibly does not need to be opened. A redness of the drum does not mean that it has to be incised, temperature does not mean it, or pain. If there is the slightest possible bulging, that drum should be opened and opened freely, at once. Establish drainage, if possible through the normal route of drainage of the middle ear, through the Eustachian tube. Particular attention should be paid to the naso-pharynx. Solutions to shrink the tissues applied in the nose or the orifice of the Eustachian tube, if possible, with applicators, frequently causes drainage through the natural drainage canal.

It matters little what medication you are using after the incision. I think a solution containing camphor of menthyl in small quantities, and alcohol, and a little glycerin is as good as we can use. That particular solution is hygroscopic in nature. It abstracts moisture from the tissues and frequently is helpful in reducing inflammation of the drum. It also has the property of being pain-removing and is also slightly antiseptic.

Dr. White and I have a bit of difficulty about the after treatment of these cases after incision. I have seen some of his cases, have followed them on service, and have found that the ears have been syringed with a warm solution. In teaching my classes in the hospitals here, talking of otitis media, I give them one

rule to follow in my cases—never to syringe an acute ear. I qualify that by saying that is my opinion—never to do it unless you are specifically instructed to do so by the attending physician. That lets me out. I caution against that because in syringing you not only fail to remove all of the secretion but you actually force some of that infected material back into the middle ear and into the mastoid cells.

Mr. President, speaking of the classical symptoms of mastoiditis, my brother, who assists me in my clinical work at the Delaware Hospital, noted a case there last week, in the dispensary, with a typical classical picture of mastoiditis. The patient gave a history of having a discharge from the middle ear for three weeks and four days before he appeared at the clinic. The discharge had stopped and he developed a redness and swelling back of the ear. The ear was pushed forward and there was tenderness on what I thought was the mastoid foramen. We sent him to the ward. I did not see him at first and my brother made a tentative diagnosis of one of two things, either acute mastoiditis or furunculosis. The patient had a blood count around 10,000 white cells, and a temperature around 100, and that evening I found what I thought was a point of swelling on the superior posterior wall, as Dr. White mentioned, and apparent edema of the superior posterior wall. I, too, felt it was either a mastoiditis or a furunculosis. I said frankly I did not know which it was, but I knew the child had to be drained posteriorly. So I sent him to the operating room the next day and found a large furuncle going down to the periosteum. The bone was not involved. The x-ray showed it was not involved and I found no involvement although I did not remove any part of it.

So you cannot always go by classical symptoms. You have to use common horse sense in making these diagnoses.

DR. W. M. PIERSON (Wilmington): There is just one angle. Of course I agree with everything Dr. White has said, but there is one angle he did not touch on which I hoped he would.

Sometimes you see a case where the family probably has had somebody else that had

acute otitis media and the doctor ordered drops of some sort, and they think the first thing to do is to put medicine in the ear to relieve the ear. Probably by the time you see the ear mullen oil or some other medicine has been instilled in the ear canal. It is difficult to tell from the drum whether it is actually a case of otitis media, for the landmarks have been destroyed. There may not be any swelling above the drum.

If I have the opportunity to see the case before anybody else has seen it, I usually advise against putting anything in the ear, and I try to control the pain by aspirin. I feel that aspirin is the best thing for both children and adults. It is not going to relieve severe pain, but in most cases of otitis media in the early stage it does relieve the pain, and it will not destroy the symptoms as will medicine used in the canal. The next day you can tell actually what is going on, whereas in the case where a lot of medicine has been instilled, it is necessary to discontinue the drops and, because of the using of medicine, sometimes postpone doing an incision of the ear drum which might be necessary.

PRESIDENT NILES: Is there any further discussion of this paper? If not, I want to thank Dr. White for his most excellent paper. I am sure I voice the feeling of the Society in saying it was very well rendered indeed, and created a great deal of interest. Do you have anything to add, Dr. White?

DR. WHITE: Where the gentlemen have apparently disagreed with me they have not disagreed so much; we are all pretty much in accord. I thank those two or three who were so very nice, because I do not believe I measured up to those very nice words.

As to what Dr. Mayerberg says about the syringing, I have never seen any ill effects from *gentle* syringing. I laid stress, you will remember, that you had to suit the case; you had to temper the wind to suit the lamb, in other words. In some cases I positively cannot succeed in getting it wiped out to my satisfaction, and I know that Dr. Keeler, the man who just died, professor of otology, in his book said that he never saw any ill effects from gentle syringing.

As to what Dr. Pierson says, my paper was not inclusive of all the angles of acute otitis

media. I just picked out a few. But I entirely agree with him as to this home treatment of acute otitis media before the ear doctor is called in, which treatment consists of putting in some kind of drops. You go to the house and find the ear canal filled with this, and you don't know whether you have a discharge out of this ear or whether you have not. The first thing you have to do is to dry it out, and when you dry it out you probably get the smell of some drug, which shows you that somebody put something in there. I think it is better, as the doctor says, to give aspirin, keep them in bed, and wait, and not have the signs befogged by some drug.

THE "E's" OF NURSING*

W. EDWIN BIRD, M. D.**

Wilmington, Del.

Young ladies, on such a momentous occasion as this, the commencement of your professional career, the usual and the expected thing is to have the speaker hand you a miscellaneous assortment of platitudinous remarks about the professional virtues you should espouse and the professional sins you should avoid—a whole lot of "Thou shalt's" and "Thou shalt not's." Well, there will be no new Ten Commandments here tonight, nor will there be any new prohibition act—let the shades of Moses and of Volstead rest in limbo, at least this once. But rather would I invite your attention to a brief discussion of the "E's" of your new calling; not the "e-a-s-e," for there is no such thing in the profession of nursing any more than there is in the profession of medicine. What I want to speak about are the capital "E's," the cardinal, fundamental "E's" of nursing—education, economics, ethics, esprit.

EDUCATION

First, education. Those of us who have been thinking about or are concerned with the education of the nurse have been worried for the past several years, for frankly the curriculum is not satisfactory. You have been taught something about anatomy and materia medica and chemistry, and a modicum of diagnosis and therapeutics and dietetics, and

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an introduction to physiology and bacteriology, to gynecology and psychology, and to a whole head-full of other ologies, the most of which will be relegated to the realm of more or less unpleasant memories, once you have passed your State Board examinations. A moment's reflection reveals that this present curriculum provides much too much education for the routine duties of bedside nursing, and much too little education to produce supervisors, instructresses and administrators. While it conforms fully to the present day standards, it is a straddle education you have received—too much for the routine things and not enough for the bigger things.

Years ago, Dr. William Mayo said that the girl who could not learn the minimum essentials of bedside care in six months would never make a nurse. Others have carried their protest against the present curriculum so far as to say that it is producing "half-baked doctorettes," with the implication that they were something more than nurses and yet something considerably less than doctors. This they justify with the statement that the curriculum, at even the best training schools, provides a three-year course, with 600 hours of instruction, superimposed upon a high school education; while the medical school provides a four-year course, with 4,000 hours of instruction, superimposed, in 40 of the 48 states, upon two years of college work. Here, I think, the comparison should end, for it is my firm conviction that no training school is attempting to manufacture "half-baked doctorettes" or "doctorettes" of any kind, but rather educated nurses.

Educational standards in nursing are rising, but educational standards in the community at large are also rising, though fortunately not as expensively, for the cost to the state of Delaware of a public school education is approximately \$93 per student per year, whereas the hospital that provides a home for the would-be nurse and an education does so at an average cost of \$916 per student per year (ten times as much), which means that for the 80,000 students enrolled the hospitals of the United States are spending \$75,000,000 a year on the nurses' training. This is only one item of many that I might mention that explains to this audience of lay-

men why modern hospitalization is so expensive to the patient, and in the nature of things I see no way by which certain of these items can be reduced and still give the patient the full benefits of modern medicine.

It is the function of the training schools to train nurses, and there is no person within hearing of my voice who would go back to the days when there were no nurses, as we know them today. No one here would tolerate conditions such as Florence Nightingale found at Scutari in 1854, when she blazed the trail that has led to the modern conception of nursing, and even then it took another 20 years for the United States to take up the movement, for the first training schools in this country were not established till about 1873.

In an effort to do something about the present curriculum, as far back as 1923 the Committee for the Study of Nursing Education recommended a course with 840 hours of instruction, but which, by eliminating certain non-nursing duties, actually reduced the time required to a probationary period of four months and a training of 24 months; in other words, a much shorter course, a much harder course, but a much better course. This is a fine recommendation, but will require a very considerable alteration in the internal management and financing of our hospitals. I think we will come to it, gradually. The ultimate, of course, would be a college of nursing, in which relatively little time would be spent on bedside instruction, but more time would be devoted to instruction in cost accounting and finance, in administration, in sociology, in teaching, and so on. In 1910 the University of Minnesota pioneered the way with just such a course, a five-year course, I believe, and grants at its completion the degree of Bachelor of Science in Nursing. Today a dozen such courses are open to those who are prepared to enter them.

It seems to me that the education of the nurse stands at the parting of the ways. We have got to have less expensive bedside care for the patient; so we are going to have more but cheaper nurses, or we are going to have fewer nurses, better trained and better paid, who will be called on for the more serious illnesses, leaving the bulk of the routine bedside care to "nurses' aides" or "nurses' as-

sistants," who will be given a separate course of six or eight months. If this program is adopted the State Nursing Act must be amended to provide for this new assistant class, and many of the 2,000 training schools must be discontinued. What the future will bring I do not presume to say, but it will be your task, young ladies, to help evolve the correct answer.

ECONOMICS

Dovetailing closely with and arising largely out of the nurse's education is the matter of the economics of nursing. Most of you young ladies took up nursing as a means of earning a livelihood, and so your practical bread-and-butter question is: what do I get out of it? Would that the answer could be painted in brighter colors than the facts permit, but here are the facts: (1) the profession of nursing is already overcrowded, with serious unemployment; (2) it is increasing faster than the increase in the general population. There are today 300,000 graduate nurses, or one nurse to every 416 persons, an increase since 1900 of 2,374 per cent, whereas the general population has increased only 62 per cent. Such overproduction (40 to 1) has produced this overcrowding, and what happens, then to the 25,000 nurses who graduate each year? 17,000 of them will become private duty nurses and earn an average of \$1,311 per year; 1,500 will become public health and industrial nurses and earn an average of \$1,720 per year; 6,500 will become institutional nurses in hospitals and clinics and earn an average of \$2,079 per year, including maintenance valued at \$500. Now, these averages cover many years and are made higher by the incomes of the older nurses: the newer graduates stand to earn only 60-75 per cent of these averages. As a matter of fact, recent records indicate that the average private duty nurse in Delaware can expect to work only 120 days, and earn \$600 a year.

Surely the nurse must love her work to stick to it for such paltry compensation—she must love it, but then love is a funny thing, anyhow, and so we find that at the end of three years one-quarter of the nurses have married, and at the end of eight years one-half of them have married. The others will ply their profession for a varying time, but on the average,

17 years after graduation they, too, will have retired. The competition of the annual crop of 25,000 younger trained nurses, plus that of 150,000 practical nurses, plus the economic plight of the public that buys her services, and the end of the road has come, in 17 years. The longest record that I know of is 51 years after graduation; there will always be these remarkable exceptions.

As I have already indicated, the great surplus is at the bottom, mostly in the private duty group; there is an actual shortage at the top. There is need even now for three times as many public health and industrial nurses as are employed today, and some day these jobs will be actually created and the money for them appropriated. It is with these public health, industrial and institutional nurses that increased education and experience means an increase in earnings, whereas the income of the private duty nurse, per day, is as large her first year out as it will be her twenty-first year. She is, however, a good collector and actually puts into her pocket 90-95 per cent of the fees booked, which make the 70-75 per cent collections of the medical man look sick enough to need a nurse, a very special one. Bearing in mind, then, the diminishing opportunities and the static income of the private duty nurse, the main lesson for you young ladies to learn from this array of facts and figures is just this: go away somewhere and take a post-graduate course in public health, industrial or institutional nursing, so that when your chance comes you will be ready. My private tip to you is: be prepared for the jobs that the other nurses cannot fill.

ETHICS

The third "E" is ethics. Many persons do not distinguish between ethics and etiquette, and seem to think they mean much the same thing. True, in any profession as distinct from a business, the two terms are inextricably interwoven, yet there is a very real and significant difference, for etiquette is defined as the art of conventional social behavior, while ethics is defined as the science of right conduct, the principles of morality. Character building begins in the home, and the basic conception of ethics, then, begins at mother's knee, and if that knee be firm enough and un-

derstanding enough no further textbook need be read.

Etiquette in nursing is a rigorous and precise thing that moves with the formality of an army, more exacting than Emily Post. By the same token, ethics in nursing implies a rigorous and formal adherence to the Golden Rule as laid down by the Great Physician. The nurses' code* is an unwritten, a traditional one, but nonetheless a very real and binding instrument. It is derived, naturally, from the medical code, which in turn springs from the Hippocratic oath and goes back to 400 years before Christ. Our code has been the subject of much misunderstanding and the object of some derision, yet we point with pride to the fact that the lawyers, the engineers, the advertising clubs, the Rotary, the Kiwanis, and many others have in recent times adopted something that the doctors have had for 2300 years—a code of ethics.

Rather than speak in generalities I prefer to speak of just two things that are required: secrecy and loyalty. In the course of her ministrations the nurse will of necessity see and hear many things that should never be divulged. Bodies are stripped and souls are bared, but never a word passes the lips of the ethical nurse. She is under the same obligation of secrecy, ethically and legally, that the physician is, and she who passes out a choice tidbit of scandal—on the QT of course—is no longer a nurse but merely a female who has gone through a training school and gotten a diploma. Be it said to the credit of the profession that legal actions against the nurses on this score are practically unheard of, yet this word of caution, young ladies, because of its supreme importance, is always in order.

The other thing I want to stress is loyalty. First, loyalty to the patient, which involves giving the best the nurse has in service, cheer and hope. Here there can be no cutting of corners, for the employer is entitled to an honest return for the monies paid. Second, loyalty to the physician, which means not only no criticism of him in his absence, but that wholehearted support which is so necessary to the maintenance of the patient's confidence. The

nurse who undermines the doctor's influence over his patient is guilty of the meanest kind of sabotage. Third, loyalty to your profession, which requires your friendly co-operation, your constructive criticism, part of your time, and some of your money. You face a changing world; you certainly face a changing profession, and so it is your bounden duty to give to that profession your most serious thought and your most earnest effort.

ESPRIT

The last "E" is the esprit of nursing, the spirit of the thing—a sense of union and solidarity, of common interests and joint responsibilities. In speaking of loyalty to the profession I have just mentioned two of the phases of this esprit, your proper criticism and co-operation. Now let us go a step further. In order to augment and nourish a proper esprit, join the local unit of the American Nurses' Association, and keep your membership up as long as you are in practice. Attend their meetings and take an active part in their deliberations. Above all, read the current literature of your profession: subscribe to at least one good magazine devoted to nursing and literally devour it—you must know what is going on and what are the latest advances. The surest way to become a has-been is to just stand still and let the rest of the world go by.

But there are other things to this esprit besides these demonstrable items. There are certain intangibles which motivate you—the realization that service to mankind is noble; the knowledge that you are doing a worth while thing; the inner consciousness of a life well lived. These are the things of which the spirit is made. Call it pride, call it ambition, call it idealism, call it what you will, it remains the force that changes a human being into a living soul. I urge you to cultivate it, for as Job (32:8) says: "there is a spirit in man: and the inspiration of the Almighty giveth them understanding."

CONCLUSION

Thus have I tried, in my feeble way, to indicate the cardinal points of the nurses' compass, and to help start you on what I devoutly hope will be a successful career. Fortune may never come to you, but you may attain fame—there is still room for another Florence

*The Florence Nightingale Pledge is the nearest approach to a written code, but has never been adopted as such by the American Nurses' Association.

Nightingale or an Edith Cavell or an Adelaide Nutting. I do wish heartily that you find happiness in your profession, and the real happiness comes not from chasing rainbows but from doing well each single day's task. Some tasks may seem futile, but to paraphrase Tennyson, it is:

"Yours not to reason why;
Yours but to do or die."

For what is nursing after all but a calling of hard work and scant reward, a life of service and sacrifice? Yes, service and sacrifice, yet you deliberately elected to enter it, and even though you know it has its heartaches, no amount of argument could wean you away from it. Ah, such determination is the rock upon which true greatness is built.

And now, in parting, let me offer you my sincere congratulations on your reaching, after three years of trials and tribulations, the enviable status of "graduate nurse." My congratulations. May your Alma Mater ever be proud of you, and may your future be all that you wish it to be. You have come to your commencement—your take-off, and so at every stage of your flight I wish you—"Happy landings."

Thank you.

1022 Du Pont Building.

REFERENCES

1. Nursing and Nursing Education in the United States. Committee for the Study of Nursing Education. Macmillan, 1923.
2. Final Report: Committee on Medical Education. New York, 1932.
3. The Costs of Medical Care. Committee on the Costs of Medical Care, Pub. No. 27. University of Chicago, 1933.
4. Nursing Schools—Today and Tomorrow. Committee on the Grading of Nursing Schools. American Nurses' Association, 1934.

Lord Kelvin's Anniversary

Lord Kelvin, who put science to work for humanity, was born 112 years ago, on June 26. No ceremonies are needed to commemorate his birth. Every cablegram that is sent, every mechanical refrigerator, every ship at sea—the age of electricity itself—are memorials to his greatness.

Science was a jumble of theories and mathematical formulas when Lord Kelvin was born in Belfast, Ireland, on June 26, 1824. He made it the servant of the common man. Theories alone might satisfy others; to Lord Kelvin they were totally worthless un-

less put to practical use. Throughout his career he did just that—put theories to practical use. And he encouraged his colleagues to do the same, declaring: "The life and soul of science is its practical application."

From the confused and contradictory theories of his predecessors about the movement of heat from one body to another, he formulated the laws of thermodynamics, making possible the development of the mechanical refrigerator. In recognition of this contribution one of the pioneers in electric refrigerator manufacture in the United States have named their product and organization in his honor; and scientists in the field of thermodynamics refer to absolute zero as zero degrees Kelvin, measuring all changes in temperature on the Kelvin scale.

In the field of electricity, too, Lord Kelvin's contributions were great. He early realized the potentialities of electricity, declaring in the face of constant ridicule that it would some day be among the leading sources of power. Alexander Graham Bell, inventor of the telephone, and Michael Faraday, the father of electricity, were close friends of Kelvin, and he constantly championed their work. He developed the first instruments for measuring electricity, the electrometers and electric current balances. His mansion at Glasgow was the first in Scotland to have electric lighting: Lord Kelvin always claimed it was the first in the world to be completely lighted by electricity.

There was nothing of the absent-minded professor about Lord Kelvin. He was an efficient, farsighted business man.

When the Atlantic Telegraph Company was formed to lay the first trans-Atlantic cable, Lord Kelvin was placed on the board of directors. The job proved too difficult for the engineers, so the brilliant English scientist showed them how it should be done.

The problem of safety at sea interested Lord Kelvin greatly. Compasses were not very accurate in those days. In the Navy during a battle, they were sometimes useless because of the concussion resulting from gunfire. On ships of steel and iron they were even more unreliable. So Lord Kelvin created a compass based on entirely new principles.

This compass, though modified somewhat, is still in use today.

Lord Kelvin's major interest, however, was in the study of heat—the science of thermodynamics. So great was his recognition of the importance of temperature, his biographers report, that he always carried a thermometer in his vest pocket. It enabled him to know, among other things, whether the room in which he sat was being kept at proper temperature for maximum efficiency.

He died on December 17, 1907 and was buried in Westminster Abbey. On his death, Sir Richard Glazebrook said: "In the century that has passed the progress of the world has been great; and toward that progress there were few men—may I say there was no man—who contributed more than Lord Kelvin."

The Volta Bureau

"We consulted several specialists, and all of them confirmed our fears, but none offered any solution of our problem." Thus the mother of a small deaf child wrote to the Volta Bureau. The sentence might be quoted verbatim from many letters written by parents of deaf or hard of hearing children, or by hard of hearing adults.

The knowledge that deafness is present and that it is incurable comes with the force of a major calamity. It is so crushing in its effect that something positive in the way of help must be offered immediately, if the individual is not to spend desperate years in a bewildered effort to adjust himself. The parents of a deaf child must be told that the child can be taught to speak and can be successfully educated, and that this education may be begun at home immediately, even if the child is not more than two years old. The parents of a child whose hearing is only slightly impaired must be given advice as to his adjustment. The hard of hearing adult must be told about lip reading, about hearing aids, about social efforts in his behalf.

The Volta Bureau was established for the purpose of furnishing all this information to all who ask for it. Its services are free. Alexander Graham Bell, the son of a hard of hearing mother, the husband of a deaf wife,

the lifelong friend of everyone handicapped by deafness, used the money received as a prize for inventing the telephone to found the Volta Bureau so that anyone confronting the problems of deafness might be assured of help. Advice is given as to schools and pre-school training, lip reading instruction, hearing aids, social contacts, psychological difficulties. While the Volta Bureau is not equipped to do employment service, it gives information in regard to the fields of activity that are open to the deaf and the hard of hearing.

The Volta Review, a magazine for parents and teachers of the deaf and for the hard of hearing, is on the reading table of many physicians. Pamphlets dealing with all phases of deafness, except medical problems, are available to all who ask for them. Lists of such pamphlets and sample copies of the magazine will gladly be sent free of charge. The Volta Bureau is located at 1537 35th St., N. W., Washington, D. C.

Children Decreasing

Readjustments in the medical field and in hospital organization in keeping with the United States population trend, is foreseen by John Glossinger, vice-president of the Kny-Scheerer Corporation.

Children are becoming fewer in the United States population, Mr. Glossinger said. Whereas, in 1920 children under five years of age comprised 10.9 per cent of the total population, by 1930 this age group formed only 9.3 per cent of the whole. This is all the more striking, he said, in that during the same decade the total population increased 16.1 per cent.

Also cited are these interesting Census Bureau figures about the sizes of American families. In 1930 there were in the United States 23,352,990 intact marriages, that is, marriages untouched by death or divorce. The largest category—almost a third of all—was the group of 7,447,328 families who are childless. One-child families numbered 5,254,863; families with two children, 4,246,459; those with three children, 2,650,730; and those with four or more children, 3,753,610. There were fewer children in city families than in rural families.

EDITORIAL

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F. I. C. S.

Another of the already superabundant medical societies is in the pangs of birth. The baby has already been named—International College of Surgeons—and its nurses are getting ready to bedeck themselves with the awesome appendage of F. I. C. S. We have no assurance that there will be no transmutation into F. I. X., though for the sake of our personal friends among its nurses we hope there will be no such debacle.

What the American Medical Association thinks of this new baby is characteristically set forth by Dr. Fishbein in an editorial in the *Journal of the A. M. A.*, June 20, 1936, as follows. The italics are ours:

THE INTERNATIONAL COLLEGE OF SURGEONS—WHY?

Into the welter of scientific, pseudoscientific, medical and similar organizations which now appeal for the physician's patronage comes the

International College of Surgeons, promoted by none other than H. Lyons Hunt, who has already to his credit [sic] the Association of Medical Editors and Authors. The prospectus indicates that the purpose of the organization is to bring together in closer harmony the leaders of the various colleges of surgeons now in existence; yet there is not the slightest evidence that the colleges of surgeons in any other country have indicated their willingness to be brought together by this new organization. Among other objectives, the new "College" proposes to elevate the standards of surgery to a point at which international reciprocity may be realized; it is quite safe to say that international reciprocity in surgery must be a figment of the imagination for many generations to come. Apparently there will be a publicity department to keep the public informed as to what surgery can accomplish, prizes offered for research, a museum established in Geneva, a journal published and a building erected in Geneva, where the foreign promoter, A. Jentzer, resides. There are also to be annual meetings in the individual countries as well as a meeting every two years in Geneva. Finally, there will be three classes of members, notably members, fellows and masters, who will be entitled to place after their names the appropriate alphabetic insignia. The fellows are to be selected by election, appointment or examination. *Apparently the first comers are all being appointed*, but by whom and under what authority the prospectus sayeth not. Notwithstanding the obviously inflationary character of this prospectus and the complete lack of any well authenticated background for this proposed organization, a considerable number of American physicians have felt themselves highly honored by the receipt of the invitation and are already taking steps to extend the appendix to their names by the additional letters which they will purchase through this international college. There exists already an international surgical organization of standing and repute. No doubt an invitation to membership in this organization would be a considerable honor and well worthy of consideration by any competent surgeon. *An invitation to membership in the present promotion might be considered more of an insult to the intelligence of the recipient than a recognition of extraordinary qualifications.* One need not cast aspersions on the intelligence of the promoters. As psychologists they seem to have a fine insight into the weakness and folly of the average man, who likes to adorn himself in regalia and to adorn his cognomen with assorted alphabetic conglomerations.

The grim reaper has been actively engaged in mowing down the members of the local profession. Recently we recorded the deaths of Dr. Joseph P. Wales and of Dr. James Martin. This month we regret to report the death of Dr. Willard Springer and of Dr. Hugo L. Heitefuss. Mention should also be made of the death last week of the wife of Dr.

Junius A. Giles. To these bereaved families THE JOURNAL offers its sincerest condolences. The sudden exitus of young and old alike reminds us of the uncertainty of life and prompts the solemn query—who next?

The President of the American Medical Association, Dr. James Tate Mason, of Seattle, died on June 20, 1936, at the age of 54, of endocarditis, with multiple emboli. An ample obituary notice will be found in the *Journal of the A. M. A.*, June 27, 1936.

So far as we know, Dr. Mason set two records for the A. M. A. He was the first man to be elected President *in absentia*; he was the first President to die in office. By his death the profession loses a most capable leader. The duties of the Presidency will devolve upon the able shoulders of the Vice-President, Dr. Charles Gordon Heyd, of New York City.

WOMEN'S AUXILIARY

On May 26 the Delaware Branch of the Woman's Auxiliary held a luncheon meeting at the Wayside Inn at Smyrna. Mrs. Lawrence Jones, president, presided over the business meeting and introduced Dr. Morris, new Director of Maternity and Child Welfare, and Mrs. Trent, superintendent of Nursing Service, of the Delaware State Board of Health. Dr. Morris spoke most interestingly and convincingly on the work that he will attempt here and his talk was very well received.

Mrs. C. E. Wagner gave a very full report on the national convention held at Kansas City. In this connection it was reported that Mrs. Lawrence Jones was reappointed chairman of the National Archives Committee.

Mrs. Thomas Baker, chairman of *Hygeia*, announced six new subscribers. Also, that from the bridge tea held in April about \$35 was cleared. This money will be used to place 10 subscriptions to *Hygeia* in various institutions.

Mrs. Butler, chairman of sewing, reported 286 pieces completed and turned over to the Visiting Nurses' Association. The sewing meetings have been discontinued until fall.

It was announced that the next state meeting would be held at Rehoboth in October.

There were thirty-eight members of the Auxiliary present.

Low Basal Metabolic Rate and Use of Desiccated Thyroid

That the thyroid gland plays only a small part, if any, in the production of a low basal metabolic rate in conditions other than myxedema John M. Berkman, Rochester, Minn. (*Journal A. M. A.*, June 13, 1936), believes is suggested by the fact that, in the treatment of myxedematous patients with desiccated thyroid, very obvious conditions both physical and otherwise are completely eradicated by such treatment, whereas in the treatment of nonmyxedematous patients with low metabolic rates, desiccated thyroid is often required in much larger doses to maintain a normal basal metabolic rate, but it does not bring about any apparent physical change. Any classification of conditions associated with a low metabolic rate must take these facts into consideration, and a workable classification must ignore many highly important but unknown factors. The author gives the following classification, which he believes satisfactorily separates conditions associated with a low rate of metabolism: 1. Myxedema is a definite clinical entity associated with positive physical signs, including nonpitting edema, and a basal metabolic rate of —20 per cent or lower. 2. Cases of low basal metabolic rate without myxedema (a large group of cases that includes several subgroups) may be classified in accordance with various physiologic disturbances which are not of necessity associated with any physical characteristics. The low basal metabolic rate may be a familial characteristic and it is often associated with asthenia. A low basal metabolic rate without myxedema may be associated with menstrual disturbances, sterility or hypersecretory rhinitis. 3. In anorexia nervosa the lowered basal metabolic rate is associated with a combination of psychic disturbances and diminished intake of food. It may or may not affect individuals whose basal metabolic rate was previously within normal limits. 4. Hypopituitarism is a definite clinical entity associated with characteristic physical signs but without edema, regardless of the basal metabolic rate. There are two distinct indications for the use of desiccated thyroid in which its value has been definitely shown: (1) as a spe-

effic in the treatment of myxedema and (2) as a method of elevating a low basal metabolic rate to normal in the absence of myxedema for the purpose of improving the general condition of the patient. In general it would appear that, either through lack of familiarity with the use of desiccated thyroid or with the conditions under which its use is indicated, the full effect of this substance has in many instances not been obtained. The action of desiccated thyroid is slow, and therefore to some extent cumulative; also, following the ingestion of desiccated thyroid a considerable period elapses before the effect of the drug has entirely disappeared. For clinical purposes one should wait a month before attempting to determine an individual's basal metabolic rate following the use of desiccated thyroid. As a general rule one does not expect favorable results from elevation of the metabolic rate unless that rate is in the region of —16 per cent or lower and when such a rate is associated with definite symptoms, the most significant of which are fatigue and intolerance to cold. As a routine, in the absence of nephritis and cardio-vascular disease, an initial dose of 12 grains (0.8 Gm.) over a period of three or four days may be used. At the end of that time a metabolic determination is made.

OBITUARY

WILLARD SPRINGER, M. D.

Dr. Willard Springer, one of the oldest physicians in the state, died at his home in Wilmington on June 26, 1936, at the age of 84 years.

Dr. Springer was born August 28, 1851, in Mill Creek Hundred, the second son of Stephen and Elizabeth Love Springer. His mother was the only daughter of the Rev. Thomas Love, a Presbyterian minister.

After attending Newark Academy, Dr. Springer entered Lafayette College, graduating in 1871. After teaching school at Easton, he entered the University of Pennsylvania, graduating from the School of Medicine in 1874.

In January, 1881, Dr. Springer married Miss Etta F. Springer, this city, who survives. Four children also survive as follows: Dr. Harold L. Springer, physician; Willard

Springer, Jr., banker and civic leader; Mrs. H. C. Stout, of Williamsport, Pa., the former Helen Springer, and Mrs. Howard L. Baumgartner, nee Edith Springer, this city. There are seven grandchildren and one great-grandchild.

Dr. Springer was a member of Eureka Lodge, Delta Chapter, A. F. and A. M., the Delaware Consistory and the Delaware Shrine Club, and also the Sons of the American Revolution.

He served as president of the Medical Society of Delaware, and was the first president of the New Castle County Medical Society. He was also a member of the Medical Club and Obstetrical Society of Philadelphia, and for years was chief of the obstetrical division of the Delaware Hospital.

In 1877, Dr. Springer became a member of the Board of Trustees of the old New Castle County Almshouse holding the post 12 years.

Dr. Springer had been identified in banking and business circles for many years, having been president of the Industrial Trust Company and chairman of its board of directors. He was also active in the affairs of the Delaware Automobile Association.

He also was a vice-president and director of the Security Trust Company.

Previous to his illness Dr. Springer had been active in his practice, which extended over a period of 62 years. During his medical career he kept a record of the babies he brought into the world, reaching a total of 4,132, some of whom he had been physician to for two and three generations. The last was born March 27, this year.

Funeral services were held from his home on June 29, 1936. Rev. A. H. Kleffman, pastor of West Presbyterian Church, assisted by Rev. George Alison, of Bridgeport, Conn., formerly of West Church, officiated. Interment was in Lower Brandywine Cemetery.

HUGO L. HEITEFUSS, M. D.

Dr. Hugo L. Heitefuss, one of the most popular of the younger physicians of Wilmington, died suddenly of a heart attack at his home on June 29, 1936, at the age of 31 years.

Dr. Heitefuss was born in New York City on October 25, 1904. His preliminary educa-

tion was received in Holy Name Parochial School and St. Regis High School there. He studied for his A. B. degree at Fordham University, and received his degree in medicine from the Long Island Medical College in 1928.

He interned at Delaware Hospital from July 1, 1928 to July 1, 1929, and shortly afterward began medical practice in this city. He was a member of the New Castle County Medical Society.

Besides being chief of medicine at St. Francis Hospital, he was an associate of medicine at Delaware Hospital. He held membership in the Brandywine Business Men's Association, Wilmington Lodge of Elks, and Theta Kappa Psi fraternity of the Long Island Medical College.

He is survived by his wife, Mrs. Louise Howell Heitefuss; two children, Carol Louise, and Laurence Hugh; his mother, Mrs. A. F. Heitefuss, and a brother and sister, Frederick Heitefuss, of Newark, N. J., and Mrs. Marie Louise Walker, of Wilmington.

Dr. Heitefuss was particularly interested in the Big Brother movement and in Archmere Academy. He was an expert violinist, having studied under Walter Damrosch. Often he gave violin solos and obbligatos in Catholic churches of the city. The funeral was held on July 2, 1936, with interment in Cathedral Cemetery.

BOOK REVIEWS

Exophthalmic Goitre and Its Medical Treatment. By Israel Bram, M. D., formerly Instructor in Clinical Medicine, Jefferson Medical College. Second edition. Pp. 456, with 79 illustrations. Cloth. Price, \$6.00. St. Louis: C. V. Mosby Company, 1936.

Dr. Bram's book is the outcome of twenty-five years of work in the goitre field, and the data derives from 16,000 cases, of which over 5,000 were cases of exophthalmic goitre. Much of the book, in fact over three-fourths of it, concerns the etiological theories, pathology, symptoms and diagnosis of goitre. The most valuable part begins with Chapter XV, where he describes his medical treatment. Briefly, it consists of removal of discoverable infectious foci; a program of rest and exercise; a properly outlined diet; the use of certain medicaments; and the application of

psychotherapy. That this method, in Bram's hands, has been singularly successful in making patients symptom-free is amply demonstrated by this volume. Whether other practitioners could approach his results is a matter of conjecture, for Bram considers many of his cases cured, whereas Hertzler regards the disease as a continuous process the normal termination of which is a cardiac death. However, both agree, and rightly so, that surgery alone is not a cure but only one step in the cure. Bram resorts to it in two per cent of his cases. One thing is definitely apparent—the practitioner who would emulate Bram's medical method must be thoroughly familiar with Bram's book. His consideration of the psychic factors is excellent. The book should be read by all physicians who treat Graves' disease.

Allergy of the Nose and Paranasal Sinuses. By Frank K. Hansel, M. D., Assistant Professor of Clinical Otolaryngology, Washington University. Pp. 820, with 58 illustrations. Cloth. Price, \$10.00. St. Louis: C. V. Mosby Company, 1936.

Of all the manifestations of allergy the most commonly encountered are in the upper respiratory tract. Up to a few years ago attention to the nose and paranasal sinuses was directed to the anatomy, the clinical manifestations, and the perfection of operative procedures. No distinction was made between infections, allergic conditions, or the combination of both, and unsatisfactory results were obtained from many operations. Hansel's massive work supplies the means for more knowledge of the physiology, biochemistry, pathology and immunology of the nose and sinuses, better diagnosis and more successful treatments. His book goes further: it is a general allergy. Among the 35 chapters there are chapters on Roentgenographic Examination of the Paranasal Sinuses, Other Manifestations of Allergy Associated with the Nasal Symptoms, Food Allergy, Gastrointestinal Allergy, Urticaria, Erythema Multiforme, Angioneurotic Edema and Eczema, Headaches, Bronchial Asthma, Allergy and Immunity in Ophthalmology, Hay Fever.

One would think that in presenting so many opinions the author tried to cover them all, and, judging by the number of references,

2,465 in all, he about accomplished it. There are apparently but few typographical errors, such as on page 353 "Table XXIV" should be "Table XXII," and on page 578 "papillomuscular bundle" should be "papillomacular bundle." He states on pages 642 and 643, "there is a great deal of difference of opinion as to the results obtained from the standpoint of the allergist and from the standpoint of the rhinologist. It is apparent that ionization, according to the opinion of the allergist, is very unsatisfactory, and that this type of treatment is far inferior to the allergic methods of management of the nasal manifestations of allergy." It depends upon who the rhinologist is. The index is complete. There is no index of authors, which would be handy at times.

Osler said if one knew syphilis and tuberculosis he knew medicine. To these two should be added allergy, and Hansel's book should be useful to any physician active in any phase of medical practice.

Examination of the Patient and Symptomatic Diagnosis. By John Watts Murray, M. D. Second edition. Pp. 1219, with 274 illustrations. Cloth. Price, \$10.00. St. Louis: C. V. Mosby Company, 1936.

This is an unusual book, containing an unusually large amount of information directed principally to the use of the general practitioner. The author has attempted to simplify the practitioner's problem of early diagnosis and treatment by emphasis on accurate detailed history taking and careful analysis of symptoms and detailed methods of physical examination. The material is quite up to date and the short paragraph discussions of each disease, complication or laboratory procedure is clear, concise and presents the main issues without causing confusion by presentation of minor details about which there may be controversy.

One feels, however, that the book has attempted too much. It tries to combine the a b c's of early medical school history taking and physical diagnosis with a summary of the present accepted status of the pathology, pathological physiology and clinical findings of any given disease and at the same time give a detailed outline of the laboratory procedure

to be used in the working out of an accurate diagnosis. In addition the book is not well indexed. Emphasis is given the history and symptoms rather than the disease or syndrome itself. It is difficult in looking up a subject to locate it. The reviewer, for instance, spent considerable time in trying to discover an account of symptomatic diagnosis of fibroid disease of the uterus. It might be more useful if the many symptoms and the many items in the history taking which are outlined in this book were made sub-heads under the various diseases and syndromes. In the text as it stands are long numbered lists in regard to history or physical findings under the various sub-heads of nails, head, face, eyes, tongue, pulse, etc., all of which is quite difficult to correlate when one has a particular case in mind.

The excellent illustrations constitute perhaps the most valuable part of the book. They are quite appropriate, and particularly helpful in the section of disorders of internal secretions. The whole work has been done very thoroughly, and will be helpful to the general practitioner. Perhaps in a later edition some of the practical criticism above discussed will be corrected.

Synopsis of Diseases of the Heart and Arteries. By George R. Herrmann, M. D., Professor of Clinical Medicine, University of Texas. Pp. 344, with 91 illustrations. Cloth. Price, \$4.00. St. Louis: C. V. Mosby Company, 1936.

This is one of the best epitomes that has appeared recently on this subject. The history, clinical examination and cardiac x-ray are well covered. The chapter on electrocardiography is particularly well written. The chapter on cardio-vascular disease conforms to what one finds clinically. The chapter on nervous disorders with heart manifestations is also very well written and its diagrams well placed. The drawings and diagrams of the autonomic nervous system are excellent, but there is still room for additional work on blood pressures. His work with the Boullite oscilometer is quite interesting; it would be more interesting to know what were his findings with the popliteal, femoral, and tibial readings, especially the latter. The book, as a synopsis, can be heartily recommended.

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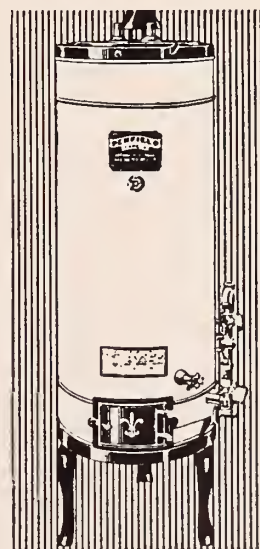
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II. VITAMIN D

• One of the most interesting chapters in the history of the science of nutrition is that relating to vitamin D. It is a record of steady advances in our knowledge concerning the vitamin. Starting with the work of Huld-schinsky in 1919 on the ultraviolet irradiation of rachitic children; passing to the classical discovery in 1924 by Steenbock (1) and by Hess (2) that irradiated foods may acquire antirachitic potency; and extending through the profound studies of Windaus (3) and other investigators, on the constitution of the pure vitamin D obtained by ultraviolet irradiation of ergosterol, the story of vitamin D is a story of steady, scientific progress.

As a result of these basic contributions, there are available today a number of excellent standardized carriers of vitamin D. Viosterol, and the fish liver oils, and their concentrates, are readily available for use in the campaign against rickets whose prevalence, especially among infants in large urban centers, still remains high. In addition to these vitamin D carriers, the vitamin D fortified or irradiated foods have appeared within recent years.

It has become increasingly evident that there are a number of compounds which may promote calcification in the various animal species. It is further evident that these compounds vary in their physiologic

efficiency with various animal species, or that they are "species specific". A number of forms of vitamin D have been postulated (4) and much research in the vitamin D field has been directed toward their isolation and identification.

In general, natural foods have never been regarded as important sources of vitamin D. The commonest food articles show extremely low antirachitic potencies when measured by conventional methods. However, recent evidence has been offered that the contribution of vitamin D made by a varied diet of canned foods may be more significant than has heretofore been supposed (5). While common foods admittedly cannot supply the high demands of infancy and childhood or other phases of the life cycle, for vitamin D, it would appear that they may supply significant amounts of the vitamin to the diet, especially in the case of the adult human, concerning whose quantitative vitamin D requirement comparatively little is known.

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(1) 1924. J. Biol. Chem. 61, 405
(2) 1924. J. Biol. Chem. 62, 301;
(3) 1932. Ann. 492, 226
(4) 1935. Physiological Reviews 15, 1-97

(5) 1934. Ind. Eng. Chem. 26, 758
(6) a. 1935. J. Home Econ. 27, 658
b. 1933. Science, 74, 368
c. 1926. Wis. Agr. Expt. Sta. Bul. 388, 124

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★ Proc. Soc. Exp. Biol. and Med., 1934, 32, 241-245
Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154
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FIG. 1. Nov. 27. Nose in unshrunk state after 14 days of spraying twice daily with ephedrine, 1% in oil. Mucosa engorged, bluish, turgid and irritated; inferior turbinate blocking nostril. Marked tolerance to treatment had developed.

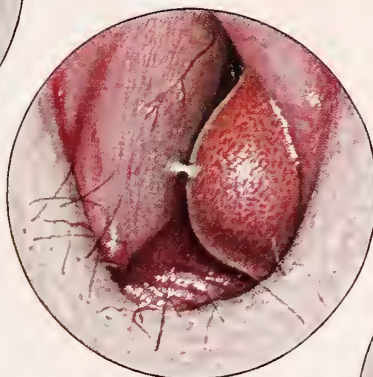


FIG. 2. Dec. 13. Nose in unshrunk state after 16 days treatment with Benzedrine Inhaler, three times daily. Engorgement reduced, tone good, irritation relieved. Note absence of atony.

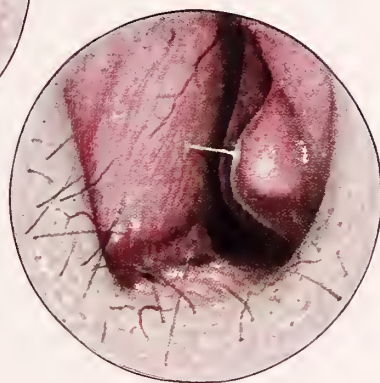


FIG. 3. Dec. 13. Nose in shrunk state seven minutes after application of Benzedrine Inhaler. High degree of shrinkage indicates no tolerance even after continued use.



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Secondary reactions are "so infrequent and so mild as to be virtually negligible" (Scarano: Med. Record, Dec. 5, 1934), and, even in very young children, overstimulation or other undesirable reactions do not occur with proper dosage.



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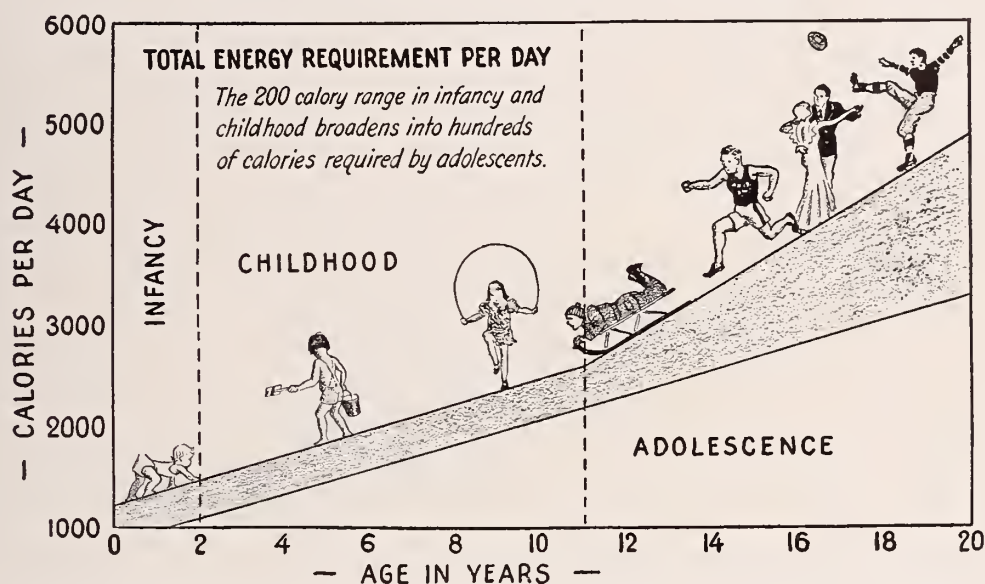
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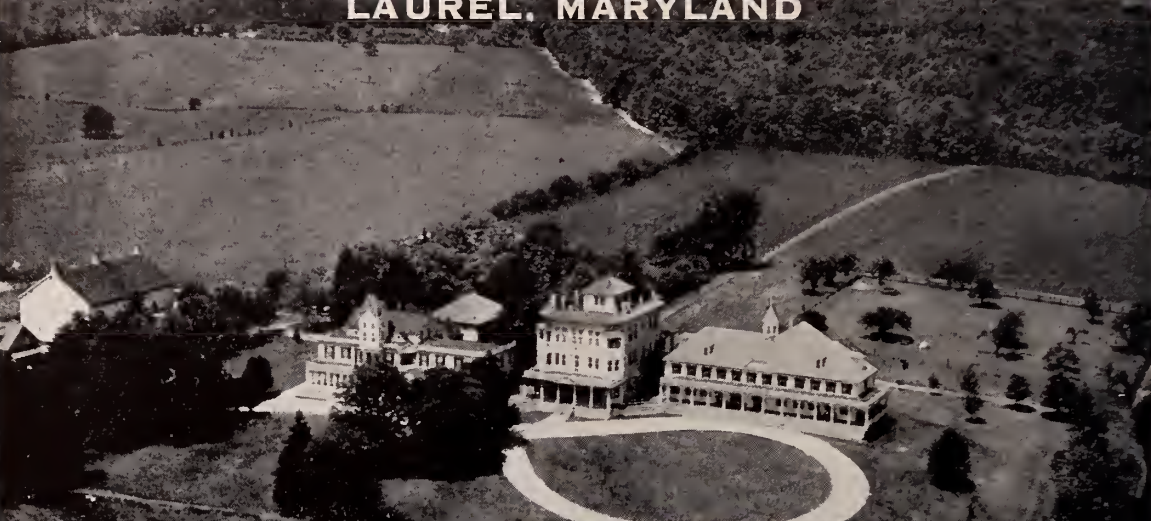
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**DELAWARE AND THE U. S.
REGISTRATION AREA**
ARTHUR C. JOST, M. D.,*
Dover, Del.

There are three measuring rods in ordinary statistical use which are commonly employed to determine the public health standing of a community, to assess the value of the public health work being carried on, or for purposes of comparison. These measuring rods are the general death rate, the infant mortality rate, and that specific death rate which indicates the losses from tuberculosis.

Other rates are very frequently used for other particular purposes, but it seems difficult to imagine conditions under which, these statistical measurements being favorable, it will not be found that measurable progress has been made in most, if not all, of the fields of public health effort. As at present constituted, there are few health organizations which have not equipped themselves to wage warfare against the conditions which tend towards the increase of these rates, and improvement measured by a continual reduction is the aim, as it usually is the result, of the programs which the health organizations have adopted. To the theoretical objection that there must come a time when these have been brought to an irreducible minimum, it can only be said that surely in this state, and even as well in those states where the natural conditions are such as to be still more favorable than here, there are few individuals who would be willing to assert that the limits of improvement have been reached. There are everywhere goals of attainment not yet reached—goals which may continue for many years to be unattained or unattainable.

General Death Rate:

This rate, indicating the number of indi-

viduals dying each year in one thousand of population—and often referred to as the crude rate as opposed to a standardized or corrected rate—is possibly one of the three most apt to be affected by conditions which may not appear in the calculation. Populations differ widely in respect of many characteristics and each difference in essential characteristics may have a very decided, though perhaps hidden, effect on the height of the rate. It is the one which, so far as the state of Delaware is concerned, is the most unfavorable. It has been so for years. In all probability it will continue to be so for years to come. Of all the states of the Union, the Delaware crude rate has been one of the highest, and the one which from year to year has varied least. It is only of recent years that there has been any tendency for the rate to fall. It will be seen that over a period of years it has maintained itself in about the same relative situation in comparison with the rate of the U. S. Registration Area, showing little tendency towards a reduction greater in amount than is that of the larger area.

GENERAL DEATH RATES
(Rates per 1,000)
U. S. Registration

Year	Area	Delaware
1920	13.0	15.7
1921	11.6	14.3
1922	11.7	14.5
1923	12.2	15.1
1924	11.7	14.2
1925	11.8	14.5
1926	12.3	15.9
1927	11.4	13.8
1928	12.1	13.6
1929	11.9	13.2
1930	11.3	13.6
1931	11.1	13.8
1932	10.9	12.9
1933	10.7	13.3
1934	11.0	13.3

There are at least two reasons for the height of the Delaware rate and its relative immobility

*Executive Secretary, Delaware State Board of Health.

ity over a period of years. The more potent of the two is the adverse population composition which is so easily apparent in the census returns. Any community which has for a considerable period of time lost for one reason or another an undue proportion of that part of its population whose ages are between the early teens and middle age, must of necessity soon find itself overpopulated in respect of persons in the age groups still greater. That is one of the characteristics of the population of the state, a characteristic becoming more prominent with each succeeding census. When the census of 1920 was taken, the number of persons in Delaware aged forty-five and over represented 22 per cent of its population. In 1930 the per cent had become 26, and the end of the movement may not yet have been reached. It is the white population of the state which especially shows this characteristic. For example, in 1930 the per cent of white population of age 50 and over was 21.8 per cent of the whole; the corresponding per cent of the colored was 16.9.

It is possible by the use of the calculation followed in the standardization of a death rate to estimate that portion of a crude death rate which owes its causation to such an unfavorable population composition.

STANDARDIZATION OF DEATH RATE

Ages	Population of Delaware—1930	U. S. Death Rates—1911	Computed Deaths
1	3,705	112.9	418
1- 4	15,589	11.8	183
5- 9	22,334	3.1	69
10-14	22,627	2.2	49
15-19	21,186	3.6	76
20-24	20,134	5.2	104
25-34	36,119	6.4	231
35-44	34,211	8.9	304
45-54	27,176	13.6	369
55-64	18,613	26.2	487
65-74	11,738	55.2	647
75 and over	4,948	138.9	687
	238,380		3,624

(Population of unknown ages has been added pro rata to the age groups)

It will be seen that applying the death rates by age groups of the 1911 Registration Area to the population figures of the state of Delaware results in a total of 3,624 computed

deaths which would have occurred at those rates of mortality in the state. This is equivalent to a rate per thousand of 15.2. But, in the Registration Area as a whole, the same mortality rates by age groups resulted only in the death rate of 13.9 for the whole population. The fraction, therefore, which results from the division of 13.9 by 15.2 (which is .914), indicates the extent of disability under which the state labored in comparison with that particular population selected as a standard, due in no way to any current of mortality (since this was the same in both instances), but only to the difference in population composition. This fraction has therefore been called a factor of correction, which may be applied to the crude rate of Delaware in order to equalize, as between the state and the area selected as the standard, the adverse effect due wholly to population differences.

DELAWARE DEATH RATES
Crude and Standardized

Year	Crude Rate	Standardized Rate
1920	15.7	14.3
1921	14.3	13.0
1922	14.5	13.2
1923	15.1	13.8
1924	14.2	12.9
1925	14.5	13.2
1926	15.9	14.5
1927	13.8	12.6
1928	13.6	12.4
1929	13.2	12.0
1930	13.6	12.4
1931	13.8	12.6
1932	12.9	11.7
1933	13.3	12.1
1934	13.3	12.1

The second reason for the height of the Delaware rate is racial. The proportion of colored population in the state quite largely exceeds the proportion present in the larger unit, and on this account affects to a much greater extent the Delaware figures. The rates of loss of the colored have quite consistently exceeded that of the white population over a period of years by more than fifty per cent. It is inescapable that a rate so high for a section of the population so large must seriously affect the state totals.

DELAWARE GENERAL DEATH RATES

Year	White	Colored
1920	13.4	22.0
1921	12.2	19.7
1922	12.2	19.9
1923	13.1	21.0
1924	11.8	21.2
1925	12.4	20.3
1926	13.7	21.9
1927	11.9	19.0
1928	12.8	18.7
1929	12.1	20.2
1930	12.4	21.8
1931	12.6	21.4
1932	11.9	19.0
1933	12.4	19.5
1934	12.1	20.7

INFANT MORTALITY RATES

U. S. A. and Delaware

Year	U. S. Registration Area			Delaware		
	White	Colored	White & Colored	White	Colored	White & Colored
1920	82	132	86	106	232	122
1921	72	108	76	89	169	99
1922	73	110	76	88	190	101
1923	73	117	77	90	190	104
1924	67	113	71	75	185	91
1925	68	111	72	76	163	90
1926	70	110	73	77	176	92
1927	61	100	65	63	99	71
1928	64	106	69	69	126	78
1929	63	102	68	71	133	81
1930	60	102	65	69	120	78
1931	57	96	62	69	159	84
1932	53	86	58	63	94	68
1933	53	91	58	53	85	58
1934	55	94	60	51	101	60

It will be seen that, though there was a difference of nearly fifty per cent as between the Registration Area and the state at the first of the period covered by the table, the rate of the state being very unfavorable in the comparison, the improvement made during the later years of the period have been such as to have equalized the figures.

The table shows quite plainly, too, the effect of the high rate of the colored on the combined rate for the state. Moreover, since the proportion of colored infant deaths in Delaware is greater than it is in the Area, a lower rate for the colored must be obtained in the state than in the Area in order to show as low a combined rate. For example, in the year 1933 the Delaware rate for white infants was the same as for infants in the larger unit, and the combined rate was also the same. It was possible only because there was in the state that year a rate of loss of colored infants lower by six points than was the Area rate.

It is but to be expected that the smaller group would show greater irregularity, and not only that, but periods of rather spasmodic improvement after several years during which any ground gained appeared to have been held only with difficulty. The rate of 60 for the state during the year 1934 resulted from 240 deaths in 4,021 live births. In 1929 the number of infant deaths was 590, so that in the later year the saving of nearly one life a day had been brought about. It would appear to be possible to diminish the loss by nearly a third. The improvement which has taken place has almost entirely been the result of there having been fewer deaths from infec-

It will be seen that standardizing the white rate for 1934 (12.1), by multiplying it by the factor of correction and so counteracting the effect of adverse population differences, results in a total exactly equal to the crude rate of the larger area (11.0).

INFANT MORTALITY

The rate of infant losses is the second of the triad which is of value in the endeavor to evaluate the progress which health effort is making. The rate indicates the number of infants dying each year out of each thousand born alive. Of all the rates, it is the one most easily altered by the use of those health measures which we expect both in theory and practice to bring about improvement. The rapid reduction of the rate is a striking feature of present day experience, and, though of recent years, so far as the Registration Area is concerned, the yearly reductions are not so great as were experienced some years ago, we have by no means reached a static figure, or one as favorable as has been attained in a number of communities. When our rate shall have dropped approximately to two-thirds of what it at present is, we shall be nearing the attainment of a goal apparently quite within our reach.

tions, from infant diarrhea, from respiratory diseases, such as bronchitis, broncho-pneumonia and pneumonia, and from debility. These are all subject to additional attack, and we have by no means reached our limits of improvement.

TUBERCULOSIS MORTALITY RATE

An examination of the rates of the state and the Registration Area shows that the state has occupied an unfavorable position for many years. It is also to be seen that there has been marked improvement in both areas. The Registration Area in fourteen years has exactly halved its rate. The state has done better. Exceeding by thirty-one points the Area rate in 1920, there is but a difference of eight at the end of the period. The annual increment of improvement in respect of the Registration Area for the period from 1921 to 1933 is 3.2 points; for the state the similar figure is 5.1. The state, therefore, for the past fourteen years has made more rapid reduction of its tuberculosis losses than has the Area, and if improvement for a few more years at the same relative speeds continues, the rate for the state should soon be lower than that of the Area. There were fourteen states in 1934 with rates higher than was that of Delaware.

TUBERCULOSIS—ALL FORMS
U. S. A. and Delaware Rates
(Rates per 100,000 of population)

Year	U. S. A.	Delaware
1920	114	145
1921	99	137
1922	96	118
1923	93	114
1924	90	114
1925	87	100
1926	87	109
1927	81	96
1928	79	82
1929	76	81
1930	72	69
1931	68	87
1932	63	67
1933	60	73
1934	57	65

This is the more satisfactory since there has not yet been available in the state the full equipment of protection which is needed. The completion of the hospital now under con-

struction ought, fairly well, to supply the needed provision for hospital treatment for the whites of the state's population. The needs for the colored, however, are still far from being met. Our full requirements in this particular having been obtained, we can very confidently predict improvement and a rapid progress towards tuberculosis control.

That the rate of improvement among the colored has not been as rapid as it has been among the whites is quite apparent if the rates by races are compared.

TUBERCULOSIS BY RACE
Delaware 1920-1934

Year	White	Colored
1920	117	317
1921	108	327
1922	85	331
1923	87	280
1924	88	284
1925	74	260
1926	85	258
1927	70	253
1928	64	189
1929	66	179
1930	50	186
1931	65	225
1932	51	178
1933	55	187
1934	46	173

This table indicates approximately 60 per cent improvement in respect of the whites, while the improvement among the colored is about 45 per cent. The rate 117 of the year 1920 signified 226 deaths of whites in the state. In 1934 the rate 46 resulted from 99 deaths.

It is but to be expected that in a unit of population so small as is the state there would be quite marked degrees of irregularity, in any series of figures which extends over a period of years, an irregularity which tends to be smoothed out in the showing of more populous units. An entirely orderly and regular improvement can hardly be expected. Trends, if definite over periods of a sufficient number of years, are more trustworthy than isolated figures, and these, in respect of all the indices considered, indicate that there has been a quite measurable, if not entirely satisfactory improvement over a period of years in the state.

A TEN YEAR SUMMARY OF THE
DISCHARGED CASES FROM THE
BRANDYWINE SANATORIUM

L. D. PHILLIPS, M. D.,*
Marshallton, Del.

About ten years ago the State assumed the responsibility of operating the Brandywine Sanatorium. It is felt at this time that a summary of the present status of the discharged cases during this ten-year period may be of some interest.

It is generally known that the Sanatorium admits only cases of tuberculosis or tuberculous suspects for a limited period of observation, until a definite diagnosis can be obtained. All stages of the disease are admitted, including the hopeless terminal cases.

Even though some of the cases on admission are far advanced and hopeless, we believe by their confinement in the Sanatorium the danger of their further infecting the community is lessened. Therefore, it is a question as to which is the better for the future health of the state: to admit only favorable cases who will respond to treatment, or far advanced positive sputum cases who are probably hopeless but who are spreading the disease. After some thought, the State Board of Health ruled that all cases shall be admitted in order of their application regardless of the stage of the disease.

The following table summarizes the admissions and discharges of these patients for year during the past ten years:

ADMISSIONS AND DISCHARGES—10 YEARS

Year	No. of Adm.	Improved	Less than		Non-T. B.	Died	Dis. Total
			Un- improved	3 Mos. Stay			
1926	82	24	10	3	12	25	74
1927	82	42	9	11	7	20	89
1928	88	37	7	5	7	23	79
1929	92	27	15	9	7	29	87
1930	117	39	16	7	20	17	99
1931	91	36	10	7	11	17	81
1932	61	20	11	6	4	15	56
1933	79	34	10	3	4	18	69
1934	77	30	12	3	2	10	57
1935	77	32	5	8	1	17	63
Totals	846	321	105	62	75	191	754

The following table is a summary of all tuberculous patients discharged from the Sanatorium in relation to their length of stay in the Sanatorium:

LENGTH OF STAY IN SANATORIUM

Discharge Diagnosis	Under 1 Mo.	1-2 Mos.	2-3 Mos.	3-6 Mos.	6-12 Mos.	1 Yr.	2 Yrs.	3 Yrs.	4 Yrs.	5 Yrs.	Total
Improved	—	1	22	107	79	74	27	10	1	—	321
Unimproved	59	32	11	29	24	10	1	1	—	—	167
Died	43	23	21	27	35	21	11	2	4	4	191
TOTAL	99	55	53	161	136	104	39	13	5	4	669

One will note from the above tables that during the past ten years there have been 754 cases discharged from the Sanatorium. Of these discharged cases 321 were discharged improved, 167 were unimproved (the majority left the Sanatorium against advice, 62 of whom left under three months following admission), and 191 died in the Sanatorium. Included in the above table are 61 children, all fourteen years of age or under.

The following is a tabulation of these 61 children with relation to admission and discharge diagnosis:

CHILDREN (UNDER 14 YEARS OF AGE)

Admission Diagnosis	Improved	Un- improved	Died	Non-T. T.	Total
Advanced	—	1	1	—	2
Moderately					
Advanced	1	—	—	—	1
Minimal	7	—	—	—	7
Extra-Pulmonary	3	1	1	—	5
Childhood	29	—	—	—	29
Observation	—	—	—	17	17
Total	40	2	2	17	61

It will take years of thorough follow-up work on children discharged as having been improved of childhood type, pulmonary tuberculosis, to determine whether they as readily develop the adult pulmonary type as the other infected children who have not received any institutional care.

The following table is a summary of the patients who were discharged improved in relation to their present state of health. These figures do not total 321 as re-admissions are not included (quite a few were re-admitted for only a few days for surgical treatment), nor did we include any patient whose stay in the Sanatorium was under three months. Even though there may have been a slight improvement, it is felt that definite lasting benefits from the treatment of tuberculosis cannot be obtained under at least a three months' period.

*Director, Brandywine Sanatorium.

PRESENT STATE OF PATIENTS DISCHARGED
AS IMPROVED

Admission Diagnosis	Well	Not Well	Dead	Untraced	Total
Advanced	12	8	25	6	51
Moderately					
Advanced	60	12	25	8	105
Minimal	31	1	1*	—	33
Childhood	19	1	1	—	21
Serous Membranes	4	—	—	—	4
T. B. Bones	1	1	—	1	3
Total	127	23	52	15	217

*Died of Lymphatic Leukemia.

The term "well" in the above table includes those patients whose sputum for the tubercle bacilli is negative, who have no toxic symptoms significant of an active process, and whose x-ray films show stable lesions. Listed under "not well" are those of reverse; positive sputum, toxic symptoms, or unstable lesions appearing on x-ray films. The vast majority of the cases who were discharged unimproved are either dead or listed as "not well," except in a very few instances.

Nine of the twelve patients listed as "well," having advanced lesions on admission, received surgical treatment.

The following table shows the number of patients on whom some form of surgical interference was attempted. The disease in all of these cases was considered advanced to the stage that routine sanatorium treatment alone would not give sufficient rest of the disease for improvement. Most of these cases showed on x-ray films open cavities and practically all had definitely positive sputums.

SURGICAL INTERFERENCE

	Well	Not Well	Dead	Total
Satisfactory Collapse	35	7	4	46
Unsatisfactory Collapse	3	13	46	62

From the table it will be noted that the figure is quite high for the cases in whom a satisfactory collapse could not be obtained and are tabulated as unsatisfactory. This is explained by the fact that these figures include every patient on whom any attempt at surgical interference was made, even the terminal cases in whom it was felt that artificial pneumothorax, etc., would not be successful. However, attempts were made in this type of case in the hope that a small per cent could be improved.

The following table is a combined summary of the deaths in the Sanatorium for the past

ten years in relation to their length of stay in the Sanatorium:

DEATHS IN SANATORIUM

Diagnosis on Admission	Under 1 Mo.	1-2 Mos.	2-3 Mos.	3-6 Mos.	6-12 Mos.	1 Yr.	2 Yrs.	3 Yrs.	4 Yrs.	5 Yrs.	Total
Advanced	42	23	21	22	27	19	7	2	1	3	167
Moderately	—	—	—	5	6	2	4	—	2	1	20
Extra-Pulmonary	1	—	—	—	—	—	—	—	1	—	2
Observation	—	—	—	—	2	—	—	—	—	—	2
Total	43	23	21	27	35	21	11	2	4	4	191

From this table one will note that of these deaths, 87 or approximately 45 per cent of the total number of deaths died within three months after admission. Forty-three, or 22 per cent, died in less than one month following admission and a high percentage of these patients died within a week following admission.

From the foregoing one may draw the following conclusions:

- 1—The earlier treatment is instituted, the more favorable the prognosis.
- 2—If a satisfactory collapse is obtained of the extensive lesions which cannot be improved by routine bed rest, the prognosis is favorable.

MATERNAL AND CHILD HEALTH
PROGRAM AIMS TO AUGMENT
PRIVATE PRACTICE

WOODBIDGE E. MORRIS, M. D.,*

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Immense benefit over coming years will accrue to the medical men of Delaware through the maternal and child health program now in process of development by the State Board of Health.

The five-year goal is a reduction of maternal mortality from about 70 per 10,000 live births to 35, a reduction of infant mortality from about 60 per 1,000 live births to 30. Specific aims follow:

1. Public education as to:
 - a. Basic nutrition facts
 - b. Essentials of prenatal care
 - c. Adequate home preparation for delivery

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- d. Infant care
 - e. Problems of the child from 1 to 6
 - f. Maintaining the health of school children
2. Opportunities for post-graduate medical education in:
- A. Obstetrics:
 - a. The management of delivery in the home
 - b. The management of eclampsia
 - c. Post-partum problems
 - B. Pediatrics:
 - a. Neo-natal emergencies
 - b. Infant feeding

Such a program is possible only through Federal funds now available to Delaware by the Social Security Act of 1935. They are administered under the direction of the Children's Bureau, U. S. Department of Labor.

INCREASED HEALTH WORK POSSIBLE

The "contact men" of the health department are the public health nurses and dental hygienists. Their principal duty with mothers and children is to supply health information for well persons, to help sick persons, and to get them under the care of a physician or dentist.

Scrutiny of conditions in the field reveals that the two weakest links in the chain supporting Delaware's maternal and child health are nutrition, and prenatal care. Accordingly, nurses and hygienists of the State Board of Health have taken a special course in each of these subjects, and are equipped to recognize the problems in each field, and to deal with the non-medical ones.

In nutrition, the effort this coming year will be to convince the public of Delaware of the importance and economy of including in diet the four protective food groups: milk, eggs, fruit, and green vegetables.

Inasmuch as statistics from Kent County show a slightly higher mortality rate in communicable diseases, a nutrition demonstration will be undertaken here under the direction of the state nutritionist. This will be carried on in health centers, schools, clubs, and all community groups in co-operation with the various private and state agencies administering the groups' activities.

Prenatal care, ideally, should be available to every pregnant woman in Delaware. Statistics are not available to show what percentage of pregnant women receive this care at the present time. But our mortality statistics indicate that conditions in Delaware are no better than elsewhere in the United States. Our maternal death rate per 10,000 live births was 63 in 1935. Analysis of each death indicates that at least half of these lives could have been saved by adequate prenatal, obstetrical, and post-partum care.

The nurses are embarking upon an endeavor to find that class of prenatal case which has hitherto gone through pregnancy unattended. Their objectives are to find the pregnant woman early, to convince her and her husband of the importance of medical attention during pregnancy, and to arrange such attention in every case found. Also, of course, the nurse herself warns the mother of the danger signals of pregnancy, sees to it that the home is prepared for emergencies and for delivery, and educates the parents in the fundamentals of "having a baby."

MIDWIVES CLOSELY SUPERVISED

The largest single phase of this problem is midwifery. Approximately 20 per cent of the deliveries in Delaware are attended by midwives. These women are often appallingly ignorant of everything pertaining to obstetrics. They are licensed by the State Board of Health so that they may be called together every quarter for instruction, and so that the public health nurse may inspect their bags and equipment monthly. They are required to be familiar with fundamental rules of safety, including hand-scrubbing, refraining from entry into the birth canal, refraining from administration of drugs, and summoning a physician for "anything unusual about the case." A list of the names, addresses and telephone numbers of all physicians in their county is furnished them. They are advised to have every case registered with them for delivery consult a physician at least once during pregnancy for an examination of heart, lungs, blood pressure, urine, and pelvimetry.

Each midwife is required to report to the public health nurse the name and address of all cases for the delivery of which she is en-

gaged. This is estimated at half the total midwife deliveries. The nurse then visits the home to perform the prenatal visit outlined in the nurse's procedures. She seeks particularly to reinforce the importance of a medical prenatal visit.

GREATER CARE PROJECTED FOR CHILDREN

The child from 1 to 6 has been regrettably neglected hitherto in the public health program. To be sure, well baby clinics are maintained through the state where babies are weighed and measured and mothers are given advice as to food and clothing. The great majority of mothers of Delaware have not taken full advantage of this service. A result is that a lamentable number of children are brought in at pre-school examinations each spring with defective skin, eyes, ears, teeth, tonsils, hearts, hernias, and with a needlessly high percentage of evidence of malnutrition.

The birth certificates of a large proportion of children in Delaware are delivered in person by the nurse. In the future, it should be possible to follow up this visit with periodic visits at specific ages, when discussion with the mother will turn upon prevention of the ailments listed above, and upon the advantage of early correction. Evidently, this system should eventually make unnecessary summer round-ups of pre-school children, and the doctors and dentists of Delaware should find an increased flow to their offices of children in this age group. Such visits should make for a higher standard of community health through closer and more frequent contact between patient and physician.

Physical examinations in schools have for lack of "man power" hitherto been merely inspections. Parents are indignant concerning this state of affairs. Federal funds are now available for the payment of a physician for assisting county medical officers at each larger school. He will be paid a fee for each half day's services. These services will consist of a complete physical examination. The county health officer will thus be provided time to perform a complete physical examination himself. Defects found will, as always, be called to the attention of the parent, with the recommendation that the parent consult the family physician to arrange correction.

This again should react directly to the benefit of both child, parent, and physician. There should be fewer sick children. The death of a school child from disease should be rare indeed. All physicians of each community should find an increased number of little patients coming to him early, an important item of medical revenue hitherto inadequately approached.

"REFRESHER COURSES" ARE PLANNED

With the demands of private practice in Delaware, it has been difficult for many of the physicians of the state to keep up as they would wish with modern practices in obstetrics and pediatrics. The physicians who do keep up are noted for this in their communities.

Doctor Joseph B. DeLee of Chicago, at present one of the country's outstanding obstetricians, has had prepared a large number of educational obstetrical films. These are unfortunately limited in their value to the general practitioner, inasmuch as they deal only with hospital obstetrics. However, 19 of these have been purchased by the State Board of Health and will be shown from time to time throughout the state to medical groups during the coming year. They deal with the mechanism of labor, forceps, eclampsia, the treatment of breech presentation, complications of the second stage, post-partum hemorrhage, and the treatment of asphyxia neonatorum. In addition to these, in conjunction where possible, review lectures will be arranged on topics of practical obstetrical management.

Half the infant deaths of Delaware, as of the United States, occur during the first two weeks of life. The mortality in this neonatal period has been lessened but little during the past 30 years. Our immense statistical reduction of infant mortality is found in the age groups between one and twelve months.

Refresher courses, therefore, will be arranged to offer physicians information concerning the obstetrical problems of the newborn period, and the special techniques required for dealing with them. In this connection, it should be possible to arrange as well for a brief review presentation of the modern knowledge and practice of infant feeding.

SYPHILIS CONTROL IN DELAWARE

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The control of syphilis and its ultimate eradication is the next great problem confronting physicians. No public health program for this work can meet with success unless the practicing physicians of the state are whole-heartedly behind and in sympathy with it. Private physicians should and rightly so occupy the stellar roles, for they are the ones who see early syphilis.

The Delaware State Board of Health, however, with the purpose of aiding and assisting physicians, has been and is interested in syphilis control. Shortly after the World War a state clinic was started in Wilmington. This work was taken over by Wilmington hospital clinics in 1923. A clinic was started in Dover in 1923 which has continued to the present time. In November, 1934, a clinic was started in Georgetown.

Delaware has had a Venereal Disease law since 1919. It was not until 1930, however, when the report of the Special Committee on Syphilis¹ was read at the annual meeting of the Medical Society of Delaware that much interest in the reporting of syphilis was aroused. Each year there has been improvement in the reporting of cases. However, a brief glance at the figures for the past three years is rather illuminating.

	1933	1934	1935
Number of Physicians reporting Syphilis	17	11	18
Number of cases reported by Physicians	48	69	81
Number of cases reported by Clinics and Physicians	273	618	533
New cases reported by B. of H. to USPHS (physicians, clinic and laboratory reports: known duplication omitted)	1425	1636	1721
Average monthly incidence 5.8 per 10,000 population for 1935			

The new American Medical Association medical directory lists 316 physicians in Delaware, 187 of whom are in Wilmington. Of course a few of those listed are not in practice; however, it is safe to say that less than 7 per cent of the doctors in the State are reporting syphilis. One reason for this may be that some physicians think that sending in blood for the Wassermann tests obviates

reporting. This is not correct; while the laboratory keeps a record of all new Wassermann tests sent in, if a second sample from the same patient is sent in under a different name or number, duplication is bound to occur. In the past 2 years 158 physicians of the state have sent blood specimens for Wassermann tests to the state laboratory.

The objectives which Parran gives for syphilis control in New York state² are well worth adoption for Delaware. They are as follows:

- Provision for adequate diagnosis and treatment facilities;
- Improvement in case reporting and the supervision of syphilis cases;
- Intensive and complete investigation of syphilis cases and contacts;
- Professional and public education in matters pertaining to social hygiene.

Considering the application of these objectives to Delaware, adequate diagnosis of early cases of syphilis is a responsibility of the physicians of the state. The report of the Committee on Syphilis of the Medical Society of Delaware stated last year³:

"When all of us learn to respect the early penile sore, refraining from and cautioning the patient against the application of any powder, ointment, caustic or solution other than normal salt solution, until a microscopic examination (including dark-field, smear, and often tissue section) has been made, then only will we see a great reduction in the number of cases of syphilis reaching secondary and later stages. Early cures would cease to be a rarity."

There are four hospitals in Wilmington performing Wassermann tests in addition to the laboratory of the State Board of Health. No charge is made for any laboratory work done by the State Board of Health. Keidel tubes and mailing kits are furnished physicians on request. Mailing kits for deferred examination of serum for dark-field diagnosis are now available without charge at the State Board of Health laboratory. The kit consists of glass capillary tubes, a small amount of wax for sealing capillary tubes, a corked test tube container, mailing case and instructions.

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"Riehl in 1919 and coincidently Schereschewsky, using glass capillary pipettes sealed by fusing in a flame, first demonstrated the practicability of this method. Riehl found recognizable spirochaeta pallida as long as 14 days after collection. W. R. Stokes and Leroy Ewing in 1926 described an outfit for physicians to collect serum for dark-field examinations."⁴ Dark-field diagnosis by mail is practical, and should be made more use of by physicians who do not have dark-field microscopes of their own.

The following venereal disease clinics are held in Delaware:

WILMINGTON: (Delaware Hospital) Tuesday and Saturday, 9 to 10 a. m.; Thursday, 5:30 to 6:30 p. m.; (Homeopathic Hospital) Friday, 1 to 2 p. m.; (Wilmington General Hospital) Friday, 3:30 to 4:30 p. m.; (St. Francis Hospital) Tuesday, 3 to 4 p. m.

DOVER: (Kent County Clinic) Monday, 2 to 4 p. m.; Wednesday, 7 to 9 p. m. (white only).

GEORGETOWN: (Sussex County Clinic) Tuesday, 2 to 4 p. m.

The State Board of Health furnishes arsenicals and bismuth to the four Wilmington hospital clinics and conducts the Dover and Georgetown clinics. In the latter clinics patients are treated who are referred by a practicing physician. Patients not referred by physicians are diagnosed for venereal disease and given emergency treatment, if found to be infectious. All potentially infectious and late non-infectious cases are given refer cards to be signed by a physician before their next clinic attendance. An effort is made to send the patients back to their physicians, from time to time, so that contact is not lost between the family physician and patient.

In 1935, 4,792 doses of neo-arsphenamine and 4,625 doses of mercury and bismuth were given by the hospitals and Board of Health clinics.

Free arsenicals and bismuth are furnished physicians for indigent cases. It is hoped in the near future that free arsenicals and bismuth will be available to physicians for all cases. The Executive Secretary of the State Board of Health is authorized to make arrangements for the payment of physicians

undertaking the treatment of indigent venereal disease patients under the following conditions:

1. The case shall have been reported in accordance with the Statute.
2. Permission to treat the case on the charge of the State Board of Health shall be asked for and obtained.
3. The preference of the practitioner respecting medical preparation to be used (arsenic, mercury, bismuth, etc.) shall have been expressed.
4. Record of treatments given shall have been noted on the case report card obtained from the State Board of Health, together with reports of laboratory examinations.
5. On presentation of the account accompanied by the above referred to case report card showing dates, quantities and form of treatment, payment is authorized on the scale below indicated.

Intravenous injections\$1.00

Intra-muscular injections 50

Urethritis treatments 50

(Including Medicines)

6. If, after the completion of one course of anti-syphilitic treatment and the payment thereof, it becomes desirable to give more treatments, the case report card will on request be returned to the practitioner with the authorization for the continuation of treatment.

A venereal disease social service followup nurse, for the four Wilmington clinics, has been made available through the United States Public Health Service by the Social Security Act. One nurse in Kent County and one in Sussex County spend part of their time in this work, and are paid from the same source.

Case reporting was mentioned previously. Improvement depends upon the practicing physicians themselves, and their co-operation and help is sought by the State Board of Health. Physicians should realize that syphilis is a communicable disease and should be reported with as much promptness as scarlet fever, diphtheria, or smallpox. Many physi-

cians fail to report cases because they do not want the cases investigated, yet investigations should be made as to the source of the infection and subsequent contacts of the patient. This should be done by the physician. If he does not care to investigate contacts or does not have the time, then the Board of Health will be glad to tactfully assist him and see that contacts are referred to physicians for examination and treatment.

The State Board of Health can legally compel infectious individuals to take treatment.

Intensive and complete investigation of syphilis cases is being attempted in the clinics and is meeting with considerable success. Pamphlets on *The Management of Syphilis in General Practice*,⁵ by J. E. Moore et al. are available to physicians requesting them, as well as literature to be given by the physician to new patients. Motion pictures are available for male and female audiences. The Board of Health will furnish speakers for public lectures to selected groups.

With the increasing interest of physicians in venereal disease control, and with the improved facilities of the State Board of Health, much will be done to limit the spread of syphilis.

1. Chipman, I. L., et al.: Report of Special Committee on Syphilis, *Del. State Med. Jour.*, 2: 12 (Dec.) 1930.
2. Parran, T., Jr.: Syphilis Control in New York State, *Ven. Dis. Inform.*, 26: 9 (Sept.) 1935.
3. Vallett, B. S.: Report of the Committee on Syphilis, *Del. State Med. Jour.*, 7: 12 (Dec.) 1935.
4. Stokes, J. H.: *Modern Clinical Syphilology*, p. 99; W. B. Saunders, 1934.
5. Moore, J. E., et al.: *The Management of Syphilis in General Practice*, *Ven. Dis. Inform.*, 10: 2 (Feb. 20) 1929.

Chipman, I. L.: Report of the Committee on Syphilis, *Del. State Med. Jour.*, 6: 12 (Dec.) 1934.

CHILD DEFECTS AND THE PHYSICIAN

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Many physicians have inquired, recently, as to the advisability of physically examining large numbers of school and pre-school children. Some have advanced the thought that only those children who are definitely retarded mentally should be examined. It is well understood, by all, that physical defects can and do retard proper mental and social development in persons of any age. It therefore appears logical that the prevention of the retardation is preferable to correction

after a child has been allowed to repeat grades in school. It is for this reason that large numbers, especially those beginning school, are examined thoroughly.

The policy of annually examining school and pre-school children in rural Delaware is of long standing. This work has been sponsored by the State Board of Health in co-operation with the Department of Public Instruction for many years. The examinations have been made by the health officers in their respective counties with the assistance of the nursing and dental hygiene staffs.

These examinations have two distinct purposes. The primary objective is educational. We attempt to build up a proper attitude toward health in each locality we visit. The idea that the physician is an instrument only for the treatment of disease is corrected as best we can. The importance of visits to the family physician for a periodic physical examination is stressed to the child and parents. In many instances, an attitude of fear as far as physicians and dentists are concerned is broken down. The second objective is to detect physical defects in the child. The vision, hearing, skin, scalp, teeth, tonsils, heart and lungs are examined. Many defects of which the parent is ignorant are found. Any abnormality which could possibly hinder proper physical or mental development is noted. Individual record cards are made for each case. These cards are filed permanently when the child finishes school.

The parents or guardians of children found to have defects are urged to go to their family physician or dentist for corrections. Many parents have taken our advice and have done so. Many have refused to attend to the defects for various reasons. Indifference, due to lack of knowledge as to the actual importance of the abnormality, is one of the prime factors which cause corrections not to be made promptly. It is here that the nursing staff can be of marked assistance in following up cases and re-urging immediate attention by the family physician. Due to enlarged nursing facilities in the county health units, this work will be carried on more extensively in the future. In many instances, the financial condition of a family is such that corrections of

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defects are impossible without aid. Where a family is financially able the corrections are usually taken care of without much follow up work.

The indigent family is another problem. Children with defects in these families have been assisted as far as possible by the local Parent-Teacher Association funds. Service clubs interested in the work provide for some. Physicians in many localities render services to these people free of charge. It is seldom that local care cannot be provided for any urgent case.

Many defects recorded are of a minor nature and are easily corrected. Conditions such as scabies, pediculosis capitis and teeth which need a dental cleaning are found. We do not consider our diagnosis as absolute. Many conditions which we consider defective may seem satisfactory to the family physician or dentist. Any physician or dentist who has had intimate contact with a case is certainly better equipped to pass a critical opinion on that case than is a person who makes one hurried examination. The private practitioner's word is final in any instance.

These school and pre-school examinations should send a large number of patients to physicians and dentists throughout the state. This gives the doctor an opportunity to do a great deal for the health of Delaware by educating as well as treating his patients.

The staffs of the county health units will gladly welcome any criticism of these programs. Only through such criticism can we know how to plan to be of greater service to the physicians, dentists and people of the state.

THE RELATION OF THE COUNTY HEALTH UNIT TO THE SCHOOL HEALTH PROGRAM

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As health education occupies a very prominent place in the public health program, we think the school is the logical place to do a good deal of the work. Indeed, the work begins with the prospective (pre-school) school child. In the spring the child that is to begin

school in September is given a physical examination in order that defects found may be called to the attention of the parents. This is for the purpose of giving parents an opportunity to have corrections made, so that the child may enter school in the best possible physical condition, instead of being handicapped from the beginning.

When defects are found, they are called to the attention of the parents, and they are advised to see their family physician, dentist, or oculist about them. The nurses and oral hygienists make visits to the parents of children who have defects and urge them to have corrections made.

Immediately after the opening of school in September all schools taking part in inter-scholastic athletics are visited and candidates for teams are given a physical examination, special attention being paid to heart, lungs and tonsils. This is done early in order that children with serious defects may be prevented from taking part in strenuous forms of athletics, and that these defects may be called to the attention of their physician and many of them may be corrected promptly.

After the opening of school in September the first, fourth and seventh grades are given a physical examination which includes examination of teeth, tonsils, heart, lungs, skin and scalp, testing of vision and hearing, weighing and measuring.

All other grades up to and including the sixth are inspected by a nurse and their teeth examined by a dental hygienist each year. Defects found are reported to the parents with the advice that they see their physician, oculist, or dentist to have corrections made.

The diphtheria immunization program is carried on annually in every school, special attention being paid to the immunization of the pre-school child (6 months or over), with the result that on January 1, 1936, we had records of the immunization of 46 per cent of the children in Kent County under 5 years of age. This immunization of pre-school children is apparently lowering the incidence of diphtheria very greatly in the state.

From the beginning of the diphtheria immunization in Delaware in 1926 parents were invited to bring pre-school children to the

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schools for immunization, but few responded, with the result that, despite the fact that we had immunized more than 75 per cent of the school children, the morbidity rate was very little changed. Since 1932 we have *insisted* on the immunization of the child from six months to five years, and as the number of immunizations in this group has increased, to this time, our morbidity has diminished.

There is complete co-operation between the Education Department and the Health Department in the control of communicable diseases. Suspicious cases are reported to the county health units and prompt investigation and exclusion from school aid largely in prevention and control of epidemics, and improve the attendance records.

We feel that physical examination of pre-school and school children is very important.

It is very unfortunate for a child to begin school with defects, such as poor vision and infected tonsils, which handicap it to such an extent that it cannot possibly keep pace with normal children. The result is that the child frequently develops an inferiority complex which may never be overcome.

We feel that the function of our department in this work is to find abnormalities and call the attention of the family physician, oculist or dentist to them. The fact that we report them does not necessarily mean that we think they require immediate attention. Our work necessarily has to be done rather hurriedly and often under conditions not conducive to accurate diagnosis, so we report conditions to the physician for further study. For example, we report all heart murmurs and irregularities without attempting to determine their cause or significance.

WHAT THE PUBLIC WORKS PROGRAM HAS MEANT TO DELAWARE

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The summer of 1936 represents an important milestone in the progress of sanitation in this state. Under the Public Works program, fostered by the Federal Government, a considerable amount of sanitary work has

been accomplished, notably in the installation of sanitary sewerage systems in several of the towns in this state, where three or four years ago this looked to be somewhat in the future.

The first two towns to come under the Federal program of the 30 per cent grant were Harrington and Elsmere. Harrington's sewerage system comprises a complete layout and in addition, primary sedimentation and chlorination for the treatment of the sewage. Elsmere, which constructed its sewerage system at about the same time, has not been able to utilize its system until the past week. This holdup, which has been very embarrassing to the town officials, was occasioned by their acceding to the writer's suggestion that, instead of constructing two separate sewage treatment plants, they combine their forces with the Levy Court of New Castle County and construct an interceptor sewer to carry their wastes from Elsmere to the sewage treatment plant located at Richardson Park which was designed to take care of this whole valley. After considerable difficulty in rock excavation, this interceptor has now been built, and Elsmere will be able to utilize their new sewerage system. The property owners will pay a small annual fee for the use of the interceptor, but the town officials will not now have the worries of two small sewage treatment plants.

The city of Dover has recently put in operation a unique sewage treatment plant and incinerator. There are only a few of these installed in the United States, and Dover happens to be one of them. At the same time that the combined incinerator and sewage treatment plant was constructed, an interceptor sewer was constructed to take the wastes out of St. Jones Creek, and to bring them to one central point, and thence to be pumped to the new sewage treatment plant. The sewage treatment plant at Dover consists of a pumping station, primary settling tanks, sludge digestion tanks and chlorination, with the chlorinated effluent discharging into St. Jones Creek. The type of settling tank is one which has mechanically operated scrapers which scrape the settled sludge along the bottom of the tank to a sump whence the deposited solids are picked up by pumps and

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discharged into the sludge digestion tank. By this method the supernatant liquid is kept fresher and not contaminated by decomposing solids as is the case in the older type of tanks. The sludge in the sludge digestion tank undergoes decomposition, giving off certain gases, including methane, and these gases will be collected under a special floating cover and be used to heat the incinerator building, as well as to heat the recirculating water which is sent through coils in the sludge digestion tank, in order to raise the temperature of the sludge so that the production of gas will be greater. In time, if the production of gas warrants it, it may be possible to use this gas to assist in the burning of the refuse. The whole layout, consisting of the incinerator and sewage treatment plant, is a very neat substantial brick structure situated below the state capitol and in harmony with structures of similar materials. Landscaping will be added to it, and it will all present a very neat appearance.

In Georgetown, a complete new sewerage system has been installed and placed into operation the latter part of July. This is a sewerage system consisting of several pumping stations which were necessary due to the flatness of the Georgetown area, and a sewage treatment plant which consists of separate sludge digestion tanks and chlorination, somewhat similar to the Dover plant.

The sewerage system for Rehoboth is practically completed and the sewage treatment plant provided is primary sedimentation plus chlorination, with the chlorinated effluent going into the canal. Several pumping stations were also required here, on account of the general flatness of the topography at Rehoboth.

In addition to the sewerage systems constructed in these incorporated towns, a considerable amount of work is being done by the Levy Court in the Richardson Park area, Brack-Ex, Hillcrest, and Bellefonte. Further, additional work is being done along the Brandywine Creek, to lessen further the load of pollution going into this stream.

These improvements, namely, adequate sanitary sewerage facilities, have been made available to some 15,000 people. At the

present time, all towns above 1,000 population in this state will have partial or complete sewerage systems. We are now reaching in this state, so far as the small incorporated towns are concerned, the stage where additional sewerage systems are going to be difficult to foster. Realizing, however, that the protection of the inhabitants of the smaller communities is as important as it is in the larger communities, the State Board of Health has continued its advocacy of the community sanitation program inaugurated under the CWA, and now continued under the WPA. The community sanitation project, under the WPA, had its start in New Castle, and work is now being done in Middletown and Townsend. By the middle of August the town of Townsend will be completely sanitized, and by the first of September the town of Middletown. The next step will be to move these labor units to Newark, and then possibly to Newport.

Under this program, the property owner pays for the cost of materials and the WPA forces, under the supervision of Mr. Glyn Newton, is constructing sanitary privies which include concrete floor and riser, ventilator and painted building. These are installed on the properties free of charge, pits dug and curbed with wood, and the privies located. At the same time, the old structure is removed and the property cleaned up. In addition to the work done in these communities, sanitary privies have been installed at service stations, canneries, camps, dairies and schools. In New Castle County, where this project is now operating, all the one and two-room schools, through the courtesy of the State Board of Education supplying the funds, have been sanitized. It is hoped that the Works Progress Administration will grant to the State Board of Health similar projects for Kent and Sussex Counties and that this work will be started this fall in these two counties.

Summing up, the State Board of Health feels itself fortunate to have added the above communities to the list of those which have sewerage systems. The immediate problem now is to foster those programs which will provide sanitary facilities of a decent type for

the unsewered areas in many of our small incorporated towns.

When that program is finished, then will come the sanitating of the rural home, a problem of considerable magnitude because of the fact that such properties are quite widely separated, and the urgency of such protection not so self-evident to the property owners.

LABORATORY COMMENTS

ROWLAND D. HERDMAN, B. S.,*

Dover, Del.

The activities of the bacteriological laboratory of the State Board of Health are confined to (1) the examination of specimens in the control of communicable diseases, and (2) the examination of specimens of water, milk and other foods for the protection of the public against diseases transmitted in this manner.

For the benefit of the new physicians in this state, and those not familiar with the work of the laboratory, I will give an outline of some of the tests by which the laboratory is able to assist physicians in the diagnosis and control of communicable diseases. The laboratory of the State Board of Health is equipped to give physicians free laboratory help in the diagnosis of the diphtheria, Vincent's angina, tuberculosis, typhoid fever, paratyphoid fever, typhus fever, undulant fever, tularemia, syphilis, gonorrhea, rabies, malaria, meningitis, etc. It is also equipped to make dark-field examinations for *treponema pallidum* on serum submitted by mail in capillary tubes. Urine, water, mother's milk, and cow's milk are also examined.

Members of the medical profession throughout Delaware are free to call upon the laboratory for any of these services. Outfits for mailing specimens to the laboratory can be obtained at all times from our regular mailing case stations, the offices of the county health officers, or from this laboratory. These mailing cases comply with Federal postal regulations and are designed to provide the most satisfactory type of specimens for examination. They are expensive, and each physician is requested to order only a reasonable number and to take the proper care of

them, so that waste may be prevented. It would be greatly appreciated if each physician would return to this laboratory all old and unused mailing cases.

Since the laboratory has been in Dover, the number of specimens received and examined each year has increased markedly. The increase in the work done represents the difference between 5,182 (1925) and 26,576 (1936) specimens per year. Here are briefly the figures showing the growth year by year during the past 11 years.

The total number of specimens received and examined for the year ending June 30, 1935, was 24,913. While this is a decrease of 1,243 specimens over the previous year, there were 1,842 less milk samples received than during the previous year. The total number of diphtheria specimens received was only one-third as great as previous year. The total number of sputum and urinalyses samples received was also less. There was a decided increase in the number of the various other kinds of specimens received and examined.

For the year ending June 30, 1936, 26,576 specimens were examined. This is the largest number of specimens ever received and examined by this laboratory. The Wassermann work has increased. For the year ending June 30, 1935, 6,114 bloods were tested for syphilis, and for the fiscal year 1936, 6,423 specimens of blood were tested—an increase of 309. The largest number of Wassermann tests made in one day was 200. This year 1,343 water samples were tested to determine if the water was safe for drinking purposes. Last year the total number was 1,014. Specimens to be examined for gonorrhea, and tuberculosis increased for the year 1936. Smears of pus examined for micrococcus gonorrhea were 1,286, which is an increase of 540 specimens over the previous year. Sputa examined for tubercle bacilli numbered 941—an increase of 221 specimens. During the year 729 cultures were examined for diphtheria. This is an increase of 511 specimens over the previous year. A large number of these cultures were from contacts in CCC camps.

*Director of the Laboratory, Delaware State Board of Health.

OBJECTIVES OF PUBLIC HEALTH NURSING

KATHRYN TRENT, R. N.,*

Dover, Del.

The public health nurse is the connecting link between the patient and the physician. To her very often comes the opportunity of making the first contact with a patient or family. This gives her the grave responsibility of persuading patients to see their family physicians so that health may be promoted and needless illness prevented.

The objectives of the Division of Public Health Nursing of the Delaware State Board of Health are, in general, as follows:

First, to develop a program of health education that will result in better individual and family health.

Second, to assist the family in adjusting social and economic conditions that affect health.

Third, to develop community interest in procuring adequate public health protection.

Fourth, to give assistance to all health programs developed for the welfare of the family and the community.

These objectives applied to special types of service are outlined below:

MATERNITY SERVICE

First, to see that all expectant mothers are provided with medical supervision during pregnancy.

Second, to instruct both father and mother in the needs of the expectant mother, and in infant care.

Third, to assist the mother in preparing for delivery.

Fourth, to teach the importance of post-partum care.

Fifth, to teach the importance of continuous supervision for the new-born baby.

INFANT AND PRE-SCHOOL SERVICE

First, to see that all babies are registered.

Second, to teach the importance of medical supervision and to assist in securing such supervision for those who cannot provide it.

Third, to instruct parents in the importance of proper feeding, and to supply them with literature on feeding and feeding problems.

Fourth, to instruct parents in daily routine of the child stressing the importance of good habit training.

Fifth, to assist in the prevention of communicable disease through a program of immunization.

Sixth, to assist in securing the correction of defects.

SCHOOL SERVICE

First, to promote instruction of pupils and parents in healthy living.

Second, to promote good school hygiene; special emphasis is placed on heating, ventilation, water supply, lighting, seating, and on sanitation.

Third, to assist the physician in routine medical inspection of all school children.

Fourth, to assist in securing the correction of defects.

Fifth, to assist in securing examination and treatment of special health problems in the school child.

Sixth, to provide teachers with literature on health.

COMMUNICABLE DISEASE SERVICE

First, to assist in securing more complete reporting of communicable diseases.

Second, to assist in the prevention and spread of communicable diseases through instruction on isolation, quarantine, and immunization.

Third, to teach the importance of medical supervision in the care of a communicable disease.

Fourth, to teach the importance of nursing care during illness and convalescence, so that sequelae can be prevented.

Fifth, to teach the importance of good personal hygiene as a means of disease prevention.

TUBERCULOSIS SERVICE

First, to assist in case finding.

Second, to promote a program of early diagnosis.

Third, to assist in arranging medical supervision for all cases.

Fourth, to teach necessary care in the home.

Fifth, to teach the patient personal hygiene

(Concluded on page 180)

*Director of Public Health Nursing, Delaware State Board of Health.

EDITORIAL

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CANCER CONTROL

In 1935 there were 285 deaths from cancer in this state. There was one death from cancer to each ten from all other causes. From the indications of the figures of the first half of the present year there will be over 300 deaths in 1936, the largest number ever recorded in the state. At this time there are probably over half a thousand individuals in Delaware who have the disease in some of its stages.

Many persons say that nothing can be done to prevent this, at least at the present time, and that we must wait for additional information or for more scientific data before anything can be done to lessen the growing toll. One wonders if these persons are the descendants of those who thought that tuberculosis was unattackable or that a high infant mortality was a disguised evolutionary blessing.

Under any circumstances, it seems quite apparent that in Delaware there has not yet developed the idea that the situation is other than a normal one. Laissez faire seems to be quite the order of the day. He is indeed an optimistic individual who expects that, as a result of any preventive work which is being carried on at present, there are grounds justifying the hope that the increase so apparent over a period of years will shortly be halted.

In the final analysis, the control of cancer is a medical problem. The cancer cell is the thing to be attacked. Its growth must be prevented, inhibited, or it must be removed. There is only one person, the trained medical man, who can do that. There is only one place, the properly equipped hospital, where treatment must be secured. The increase in cancer means that treatment facilities are not keeping pace with those conditions which encourage cancer prevalence. The ability or the readiness of the medical man to do his share cannot be questioned. But he, the medical man, is the man on the firing line, and he must be given full latitude in the selection of the conditions under which he shall work.

This by no means is the equivalent of saying that there are not other needs for which a well rounded program of cancer control must make provision. Research may uncover many essential facts. It may eventually unbar the whole secret of cancer causation. It may indicate lines of treatment far surpassing in effectiveness any yet known. Few persons will say that treatment methods have not improved of recent years. Still fewer will say that we have reached an impasse and that treatment cannot be still more improved. Research is the key which, if the door of control is ever to be unlocked, must open it.

Publicity, too, is of value. There are many facts which must be brought home to the general population before much improvement can be expected. Is it yet thoroughly understood that there is a period when cancer is a local disorder? If it is not, then the warnings for early treatment are yet falling on heedless ears. The public must be informed, too, that

it has responsibilities in connection with the support of the efforts of those immediately engaged in the fight. Hospitals must be added too; clinics must be maintained. Only adequate publicity can bring home to the public these responsibilities.

The welding together in one organization in Delaware of individuals or groups interested in cancer treatment, in cancer research or in publicity of the salient points of the whole problem should not be a task presenting insuperable difficulties. Any other approach, any attempt which does not cover the entire field can meet with but a modified success. The state of Delaware might easily lead the way in such a co-ordinated effort of cancer control.

OBJECTIVES OF PUBLIC HEALTH NURSING

(Concluded from page 178)

with emphasis on the importance of preventing infection to others.

Sixth, to assist in securing institutional care whenever possible.

Seventh, to follow up and supervise cases released from sanatorium care.

Eighth, to keep all contacts under constant supervision giving them instruction in personal hygiene.

Ninth, to assist in securing reporting of all cases of tuberculosis.

SYPHILIS AND GONORRHEA

First, to assist in finding cases of syphilis and gonorrhea.

Second, to promote and to assist in providing medical treatment and follow-up care.

Third, to find all contacts and to secure medical examination for them.

Fourth, to instruct case in personal hygiene with special emphasis on prevention of infection to others.

DENTAL CARIES—A PROBLEM IN HEALTH EDUCATION

MARGARET H. JEFFREYS, *

Dover, Del.

Dental caries, in so far as humanity is concerned, is almost universal in its distribution. It affects all classes of civilization and there are few living today who have not experi-

enced its ravages at some period during their lives.

The period of childhood and adolescence would seem to be the one of greatest susceptibility—therefore of vital importance. Reports from the White House Conference show it to be the most prevalent of all diseases among children.

Careful study has revealed the fact that dental caries with its attendant neglected conditions, including diseased conditions of the gums and lack of sanitation are primary causes of mental backwardness and malnutrition in addition to various other illnesses. Varying as to type, many do not manifest themselves until middle age and then may directly involve heart, kidneys and joints. Does it not seem possible that these and other serious ills may be prevented by correcting the conditions which cause them?

This is why prevention in childhood is so important; why our public schools that represent almost every home are the most fruitful field for this service. There is an old saying, taken from the Bible—"Train a child in the way he should go and when he is old, he will not depart therefrom." Children in our schools begin their training early and are fitted for every status of life. Why neglect that important factor on which life depends—health?

Science has proved that the combination of faulty nutrition and unsanitary mouth conditions is the underlying cause of dental decay. With proper pre-natal and post-natal care, followed by early instruction in childhood, much may be done to arrest this disease. Prevention is a matter of education rather than therapeutic or operative procedure and includes not only the education of the children but the parents. It is true that little may be done to prevent future trouble for our adult population, but they may be made to see the advantages of having proper dental care for their children.

The neglect of the deciduous teeth has been our greatest problem. Too long have the people believed that they are unimportant; that they will naturally drop out and that there will be time enough for care when the second teeth are in their proper places. Surely we

*Director of Oral Hygiene, Delaware State Board of Health.

have but to look upon the hopeless dental cripples of manhood and womanhood today to realize the falsity of this theory; men and women with profiles badly distorted due to pre-mature extraction as well as teeth that were permitted to remain in place so long—teeth that did not naturally “drop out.” Brilliant careers have been shattered by just such conditions. Can we as a race of intellectual human beings permit this to continue now that we know the answer?

It is not the child with the toothache who is our greatest concern though that is pitiable enough when we know that in many cases it could have been prevented. But it is the child who is listless, dilatory, and generally uninterested in work or play; the child who is no help to himself and frequently a detriment to his teacher and his companions. Though not true in every case, many may be attributed to the conditions just mentioned. I can well recall Dr. Willis Sutton, superintendent of schools in Atlanta, Georgia, relating at an educational meeting some years ago, the story of one of his most incorrigible students. The boy was about to be expelled from school and Dr. Sutton, having heard the grievances of his teachers, called the child to his office. He talked to him for some time and during the conversation noted the condition of his mouth and immediately decided upon an experiment. He encouraged the teachers to give the boy another trial and in the meantime took him to his own dentist, where he received the best care. Almost immediately a change was noted: self-pride and application to his studies; respect for his teachers and classmates. He soon became a credit to his school where otherwise he might have joined the other group now incumbent upon the state.

In Delaware, we strive to keep up our attendance in school. Absence from school day after day for the various reasons and many of them toothache and poor health is responsible for failures, the cost of which is very great. Bridgeport, Connecticut, from 1914 to 1919 saved many thousands of dollars that may have been spent in this way. Instead they provided dental service for their children which netted them greater returns in healthier children and less absentees. It has been said

that during the influenza epidemic of 1918 when the greater majority of the schools were closed, Bridgeport was able to keep theirs open because the people had sufficient confidence in the physical ability of the individual to resist disease and this was to a great extent determined by the condition of the mouths of the children in the first grades who had had dental health education over a period of years and who had in turn carried the influence into their own homes.

A district in Pennsylvania reported in four years a minimum number of communicable diseases in their schools. As in Bridgeport these children had had a dental hygiene service and in addition, the periodic care by their own dentist for a period of years. It was felt by those in charge that these children, through sanitary mouth conditions, had rendered themselves less susceptible to disease.

Here we are following the same plans, however, with a lesser degree of satisfaction. With a most inadequate staff we are examining the teeth of almost every child in the state each year and notifying the parents when care is required. Home visits are made when the case is most urgent and an attempt has been made to educate the parents through Parent-Teacher Association meetings, etc. We have at stated times made use of the radio as an ethical attempt at education. The cleaning of the teeth of the children in the first three grades for the dual purpose of stimulating the desire for mouth cleanliness and as an object of visualization to the parents as to what may be successfully done for their child. While these and many other methods have been used successfully, the results obtained thus far are but a scratch upon the surface.

A long time will be required before we see much improvement in the mouths of the children who are coming into our first grades; a long period during which the public must be educated so that these children will have through the first years of their lives, the types of food that are conducive to the building of strong teeth and healthy gums and the type of home supervision that will keep them in good condition. With this cycle completed, dental caries will be written as history and the children of this state will be come citizens of whom the community may well be proud.

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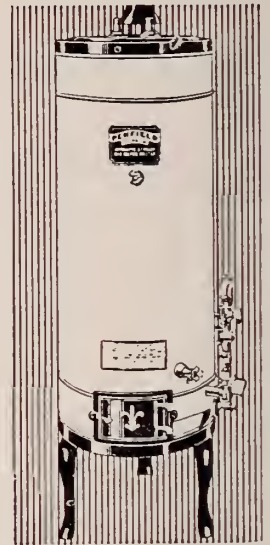
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If he is like most babies, he doubles his weight in the first few months; *triples* it in the first year. Every part of his body must make adjustments to accommodate this proportionately tremendous growth.

A new baby encounters disease-producing germs for the first time, and must build up resistance against them. If he does become ill, he is without the power to tell what the trouble is or where it lies. And when upset, he fre-

quently is further endangered by the well-meant, but often harmful, suggestions of relatives and friends who "know just what to do."

Yes, infancy is so hazardous a period that, last year, the number of deaths among babies under one year of age was more than *three times* the number of deaths from automobile accidents.

The doctor is the one person equipped to give parents competent guidance through this dangerous period of a baby's life.

The doctor who sees the baby regularly can often detect sickness or physical trouble in its *early stages*. He can prescribe correct diet, proper hours of sleep, healthful and sensible handling of the habit problem. And he can start an

important immunization program, to prevent such diseases as smallpox, diphtheria, and whooping cough.

Enlisting the doctor's help—entrusting growth, diet, and general health to his supervision—is one of the most sensible precautions parents can take in those dangerous days of the child's first year.

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VITAMINS IN CANNED FOODS

III. VITAMIN A

• The most characteristic evidence of severe human vitamin A deficiency, and one which is increasingly rare in this country, is xerophthalmia. Night-blindness, one of the manifestations that usually precedes xerophthalmia, has been recognized as a deficiency disease since the time of Hippocrates who described the disease, and its cure by eating liver. Infrequent reports of this disorder, however, still appear in the American literature. Most if not all of the symptoms accompanying a deficiency of vitamin A are thought to be the result of an impairment of the epithelial tissue (1). In this connection, a new method for the quantitative determination of this vitamin is based on the keratinization of germinal epithelia (2).

That vitamin A exerts an influence on the growth of human infants and children is also generally accepted.

As early as 1919, a relationship between vitamin A in plant foods and plant pigments was postulated. Research since that date has indicated that beta-carotene and some related compounds may be considered as provitamin A (3).

The vitamin A potency of fruits and vegetables is apparently due to their carotene

content, since vitamin A as such has never been found in plant tissue. Ingested carotene is believed to be converted into vitamin A by enzyme action in the liver of the animal (4), in which organ the vitamin is stored.

Vitamin A in the form of carotene may be present in yellow, green or red pigmented fruits and vegetables—in the two latter cases, the yellow color of carotene being masked by other pigments present. Color alone, therefore, is not always a reliable index of potential vitamin A potency.

Both vitamin A and carotene are relatively stable to heat but are subject to destruction by oxidation. However, foods of both animal and plant origin, when canned by modern methods, have been found to retain their vitamin A potencies in high degree (5).

In fact, in some instances, practically no loss of vitamin A potency can be detected by formal bio-assays (6).

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- (1) 1927. J. Exp. Med., 46, 699
(2) 1935. J. Nutrition, 9, 735
(3) 1929. Biochem. J., 23, 803

- (4) 1931. J. Biol. Chem., 94, 185
(5) a. 1933. J. Am. Diet. Assoc., 9, 295
b. 1931. J. Nutrition, 4, 267

- c. 1935. Am. J. Pub. Health, 25, 1340
(6) a. 1925. Ind. Eng. Chem., 17, 69
b. 1926. Ind. Eng. Chem., 18, 85

This is the sixteenth in a series of monthly articles, which will summarize, for your convenience, the conclusions about canned foods which authorities in nutritional research have reached. We want to make this series valuable to you, and so we ask your help. Will you tell us on a post card addressed to the American Can Company, New York, N. Y., what phases of canned foods knowledge are of greatest interest to you? Your suggestions will determine the subject matter of future articles.



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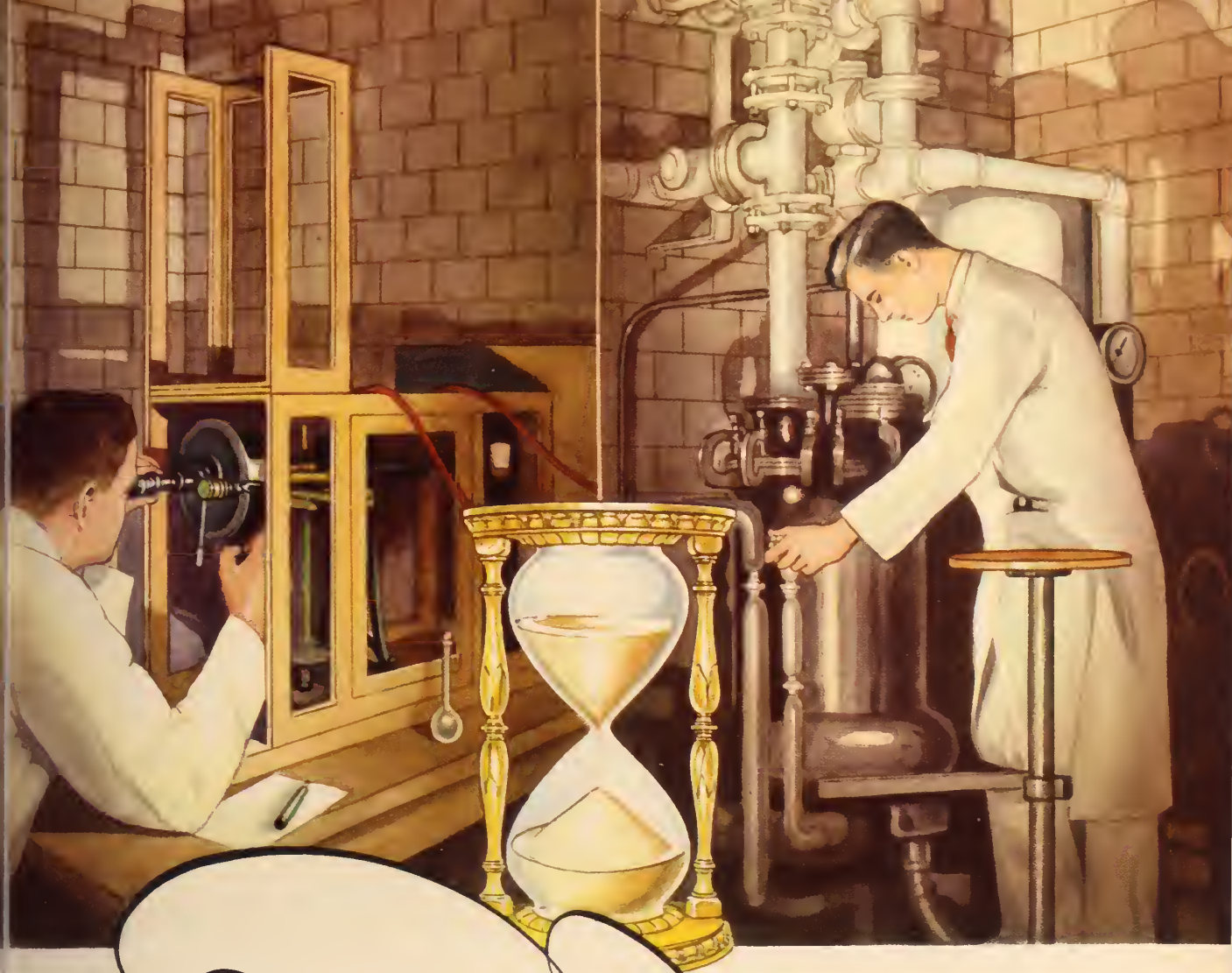
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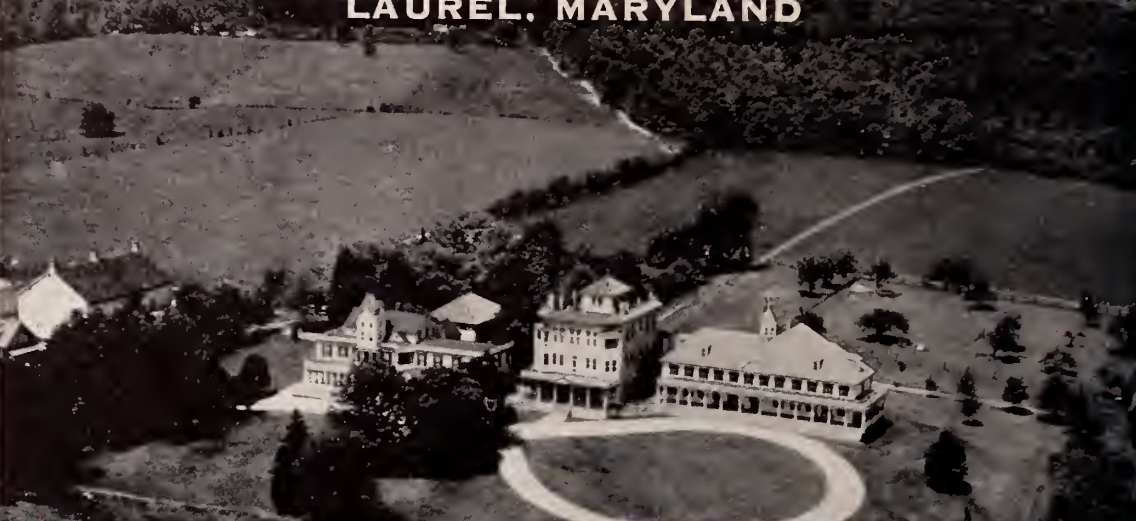
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MEDICAL REPORT OF THE FERRIS INDUSTRIAL SCHOOL

ROBT. W. TOMLINSON, M. D., M. Sc. (Med.)*
Wilmington, Del.

The appended data portrays the effort exhibited in accruing such information, from September 1, 1935 to September 1, 1936, and the physical status of enrolled personnel. Since the compilation of the cases of cardiac disease 5 additional ones have been admitted and examined but have not been correlated as to provocative factors; all of the cases of presumed or potential tuberculids from the roentgenographic standpoint have been re-rayed and proven either negative or quiescent, and the one positive case has been graduated from the School. Some essential corrective measures, as the prescribing of corrective lenses for defective vision, the attention of an orthopedist to the mal-conditions of extremities as portrayed tabularly, the performance of complete blood counts, and the making of electro-cardiographic studies of the cardiac cases await the securing of an adequate budget to defray the cost of the same, as it is manifestly unfair and unjust to send these cases, which are state's wards, into the various clinics of the several city hospitals and expect gratuitous treatment when they are already embarrassed financially because of the inadequacy of funds to care for the indigent.

Each boy is given a complete physical examination on admission, an actual copy being exhibited below. The State Board of Health Laboratory performs the Wassermann and urinalysis, tests for and inoculates against diphtheria, tests for susceptibility to scarlet fever, and vaccinates against smallpox; Brandywine Sanatorium, through Dr. Phillips, gives the tuberculin tests and examines

roentgenographically for the presence of evidence of pulmonary tuberculosis.

Limitation of allocated space in this publication necessitates the brevity evinced, but feel the Medical Society of Delaware will be interested in becoming familiarized with the medical work performed at this school.

PHYSICAL EXAMINATION

Date	Name	Age	Color
12/11/35	John Doe	14 yrs.	White

Head: Large, bony. Ant-Post. Diam. 7"—17.5 cm. Interpart. Diam. 5½"—13¾ cm.

Ears: Large; normal morphology and emplacement. Otoscopic: tympanic membrane right, normal; left, nonobservable, due to large amount of ceruminous exudate in internal auditory canal.

Eyes: Large, wide palpebral fissures. Pupils round, regular, equal and react to light and accommodation. Left lens shows an opacity due to traumatic cataract. Diam. right, 1¾"—4.375 cm.; left, 1¾"—4.375 cm.

Mouth: First molar, right mandible, extracted. Second molar, left mandible, extracted. Left central incisor, maxillary, extracted. Third molar, right maxillary, extracted. Teeth dirty, need cleaning. Tonsils have been enucleated. Pharynx, negative. Neck normal, no adenopathy evinced.

Thorax: Sthenic, pterygoid scapulae; respiratory excursus normal and equal, bi-laterally. Percussion seemingly impaired at the right apex and the right base posteriorly. Vocal fremitus normal throughout. Auscultation: no adventitious elements are audible. Vocal resonance increased at the right apex anteriorly and posteriorly, and over interscapular regions. Whispered voice intensified over the same areas. Diameters: Ant. Post. 6½"—16.625 cm. Transv. 9"—22.5 cm. Intercost.

*Attending Medical Director.

(12th rib)— $6\frac{1}{2}$ "—16.625 cm. Circumferential: deflated 26", inflated $30\frac{1}{2}$ ",

Cardiac: Supf. card. dull, increased to the left in the second interspace, $1\frac{1}{4}$ " to left of midsternal line. Fifth left interspace, $4\frac{1}{4}$ " to left of midsternal line, or $1\frac{1}{4}$ " to the left of the left nipple line, thus showing considerable enlargement. Ap. punct. max. in the fifth left interspace, $1\frac{1}{4}$ " to the left of the midclavicular line. Thrills: none palpable. Murmurs: an apical, mitral, systolic, not transmitted to the left axilla, is audible.

Liver: Ant. upper limit of dullness, sixth right interspace, midclavicular line. Midaxillary upper limit of dullness, seventh right interspace. No areas of tenderness or masses are felt. Area of liver dullness normal. Edge not palpable.

Spleen: Area of dullness midaxillary, left side, extends from eighth left intercostal space to the costal flare. Areas of tenderness or masses: none edge, not palpable.

Abdomen: Flat, tense, recti muscles well marked. Tender areas or masses: none palpable. Tympany normal, save in the left hypogastrium, where there is dullness on percussion, without any concomitant palpatory tenderness. Diam. intercostal, $9\frac{1}{2}$ "—23.75 cm.

Genitalia: No evidence of venereal disease. No evidence of hernia. No evidence of varicocele.

Extremities: The left leg is one inch shorter than the right, with a marked inclination of the left thigh from the left pelvic joint, diagonally inwards and across the knee of the opposite leg, with marked knock-knees on the left side. Flat feet, bilateral, third degree present.

Pelvis: There is considerable dystocia.

Reflexes: Right normal; left normal, but patient cannot cross the left knee over the right one, because of limitation of motion of the left hip joint.

Spine: Scoliosis, midthoracic region, with definite lordosis. The aforementioned makes tentative diagnosis plausibly one of tubercular disease warranting x-ray examination of the left hip, pelvis, and spine. Biceps, triceps, reflexes, normal. Romberg negative. Pass pointing negative. Heel to knee test normal on the right, but unable to perform with left

leg because of left hip joint pathology. Intertrochanteric diam. $10\frac{1}{2}$ "—25 cm.

Vision: Right, 0; left 20/20.

Blood pressure: 100/70.

Weight: $102\frac{3}{4}$ lbs., underweight 7 lbs.

Temp.: 98; pulse, 72; resp., 18.

Blood sent to State Board of Health laboratory for Wassermann and Kahn. Conclusions:

1. Traumatic cataract, right, blindness.
2. Scoliosis, midthoracic region.
3. Lordosis, lumbar region.
4. Pulmonary tuberculosis, right apex?
5. Mitral regurgitation.
6. Cardiac hypertrophy.
7. Splenic enlargement.
8. Shortened left leg.
9. Tubercular hip joint disease.
10. Flat feet, bilateral, third degree.
11. Pelvic dystocia, secondary anemia.
12. Underweight 7 lbs.

ADVISE:

1. Reference to eye clinic for Rx for corrective lenses.
2. Electrocardiographic study.
3. Tuberculin test, x-ray of lungs, and teleoroentgenogram of heart.
4. Complete blood count.
5. Reference to orthopedic clinic for treatment of: 1. Flat feet. 2. Short left leg. 3. Pelvic dystocia. 4. Tubercular hip.
6. Observation periodically of heart.
7. Urinalysis.
8. Sputum examination for tuberculosis.
9. Refer to dentist for treatment.

12/11/35—examination completed.

TOMLINSON.

Following is a tabulation of the cases of heart disease with previous or present incidences of acute infectious diseases, syphilis and hypertrophied tonsils, either singly or in combination with one or more of such pathologic dyscrasias, or with or without antecedent gonorrheal infection:

Mitral regurgitation, alone	1
With history of:	
Antecedent gonorrhea, alone	1
Hypertrophied tonsils, alone	2
Hypertrophied tonsils and antecedent gonorrhea	2

Hypertrophied tonsils, antecedent gonorrhea and one acute infectious disease (measles 1; mumps 1; chicken-pox 1)	3
Hypertrophied tonsils, antecedent gonorrhea and two acute infectious diseases (measles 1; chicken-pox 1)...	1
Hypertrophied tonsils, antecedent gonorrhea and three acute infectious diseases (whooping cough 1; measles 1; chicken-pox 1)	1
Hypertrophied tonsils, antecedent gonorrhea and four acute infectious diseases (measles 1; whooping cough 1; mumps 1; chicken-pox 1) .	1
Hypertrophied tonsils and one antecedent infectious disease (chicken-pox 2)	2
Hypertrophied tonsils and two antecedent acute infectious diseases (measles 2; whooping cough 2; chicken-pox 1; mumps 1)	3
Hypertrophied tonsils and three antecedent acute infectious diseases (measles 2; mumps 2; scarlet fever 1; whooping cough 1)	2
Hypertrophied tonsils and four antecedent acute infectious diseases (measles 2; mumps 2; chicken-pox 2; whooping cough 2)	2
With concomitant:	
Positive Wassermann, alone	1
Positive Wassermann and hypertrophied tonsils	1
One acute infectious disease (measles 2)	2
Two acute infectious diseases (measles 1; whooping cough 1)	1
Four antecedent acute infectious diseases (measles 1; mumps 1; whooping cough 1; chicken-pox 1)	1
With dilatation, alone	1
With bradycardia and arrhythmia	1
With cardiac hypertrophy	1
With bradycardia, alone	1
With hypertension, alone	1
Mitral regurgitation	32
Cardiac hypertrophy, alone	32
Bradycardia, alone	1
Cardiac Cases	34

Save in the cases of mitral regurgitation, exhibited as a solitary clinical entity, it is impossible to determine with any degree of accuracy, except in instances where only one antecedent acute infectious disease or gonorrhea were known to have been present, historically, as to the provocative factor of the cardiac malcondition, and while this is not illuminating, the portrayal of the minutia of detail evinced, is, at least, instructive.

Acute infectious diseases in the personnel of the School, antecedent to the physical examinations of 1935-36, have been as follows: measles, 17; mumps, 10; whooping cough, 14; scarlet fever, 6; chicken-pox, 10; total 57.

There were seven members who reacted positively to the tuberculin test and exhibited roentgenographic evidence of active pulmonary tuberculosis. Relative to their weight status, at the time of such roentgenographic examination, five were under weight, but within 5 lbs. of normal; two were 8 to 9 lbs. overweight.

The weight status, therefore, appears to be irrelevant.

In another group of 16, four of whom were 4-21 lbs. overweight and 12 of whom were 5-17 lbs. underweight, all of whom reacted positively to the tuberculin test, but manifested only suspicious evidence roentgenographically of active pulmonary tuberculosis, the overweights showed less positivity by the tuberculin reaction than the lightweights, but are as a group viewed as tubercular and will be retested six months from date of primal examination. Not all, upon physical examination, prior to the research instituted evinced adequate signs to warrant a tentative diagnosis of pulmonary tuberculosis, illustrating the value of such research as a definite indicator.

A summary of the examinations made to August 1, 1936, shows the following:

Heart disease	39
Tonsils and adenoids — needing removal	107
Positive tuberculin tests	123
Tuberculin tests to be performed	18
X-ray evidence of pulmo. tbc.	7
X-ray evidence of conjecturally positive lesions of pulmo. tbc. (probably arrested but x-rays 7/20/36 to confirm or refute)	15

Needing corrective exercises for spine and chest	27
Flat feet, club feet, and short legs ...	161
Needing corrective lenses for defective vision	87
Needing reference to ear clinic for ear disease	11
Referred to dentist and treatments completed	64
Needing dental treatment	6 70
Hernia	7
Undescended testicles—under treatment and improving	2
Gonorrhea (prior to September 1, 1935)	36
Since September 1, 1935	7 43
Positive Wassermann and Kahn	20
5 lbs. or more underweight	45
5 lbs. or more overweight	57
Positive reactions to smallpox vaccination	49
To be vaccinated against smallpox ...	16
Showing positive reactions to diphtheria—all immunized	46
To be tested for diphtheria susceptibility	18
Showing susceptibility to scarlet fever	25
Having scarlet fever, 9/1/35 to 8/1/36	5
To be tested for susceptibility to scarlet fever	18
Having had anti-tetanic serum, diphtheria antitoxin or horse serum, ascertained so as not to induce anaphylaxis	80
Nephritis	24
Needing surgical operation	2
Mental examinations completed	166
Normal	10
Dull normal	20
Borderline normal	43
Borderline defective	4
Moron and mentally defective	1
Morons	58
Unclassified	19
Feeble minded	2
Psychopathic personality ..	3
Abnormal personality	1
Mental defective	3
Hereditary defective	1
Unstable	1
Classified by intelligence quotient	161

Intelligence quotient of 100 1

I. Q. 90 to 100 10

I. Q. 80 to 90 22

I. Q. 70 to 80 65

I. Q. 60 to 70 40

I. Q. 50 to 60 20

I. Q. 40 to 50 3

Average I. Q.—Stanford

Binet Test—161 cases..... 65

Average I. Q.—Arthur

Performance Test—63 cases..... 63

Average I. Q. of both tests—224 cases. 64

Needing to be examined psychiatrically

Needing complete blood counts 222

Needing electro-cardiographic studies. 39

Cases operated on

1021 Park Place

Medical Reserve Training Course

The eighth annual training course for Medical Department Reservists of the Army and Navy will be held at the Mayo Foundation, Rochester, Minnesota, from October 4 to 17, 1936.

This training course was first inaugurated by the Seventh Corps Area at the request of the Mayo Foundation to give training in military medicine to the younger medical men connected with the Foundation. Other reserve officers requested permission to enroll and to take advantage of the opportunity to attend clinical presentations during the morning hours. Such permission was granted and such attendance has become so increasingly popular that it is now necessary to limit the enrollment.

The program will follow the plan of the past years. The morning hours will be devoted entirely to professional work in special clinics and study groups. The afternoons and evenings will be devoted to a medico-military program.

This training is on an inactive duty status and is without expense to the Government. Enrollment is open to all Navy and Army reservists of the Medical Departments in good standing. Applications should be submitted to the Surgeon of the Seventh Corps Area, Omaha, Nebraska, or the Surgeon, Ninth Naval District, Great Lakes, Illinois. Enrollment is limited to two hundred.

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Representative to the Delaware Academy of Medicine

W. O. LaMotte, Wilmington

IN MEMORIAM

WILLIAM F. HAINES, Seaford, Nov. 29, 1935
JOSEPH W. BASTIAN, Wilmington, Dec. 7, 1935
WILLIAM P. ORR, Lewes, Jan. 9, 1936.
JOSEPH P. WALES, Wilmington, Apr. 16, 1936
JAMES MARTIN, Magnolia, May 25, 1936
WILLARD SPRINGER, Wilmington,
June 26, 1936
HUGO L. HEITEFUSS, Wilmington,
June 29, 1936

BY-LAWS

Article X

SECTION 1. No address or paper before this Society, except those of the President, invited guests, and orators, shall occupy more than twenty minutes in its delivery; and no member shall speak longer than five minutes,

nor more than once on any subject except by unanimous consent.

SECTION 2. All papers read before this Society shall be typewritten, double spaced, with wide margins. Carbon copies will not be accepted.

SECTION 3. All papers read before this Society shall become its property. Each paper shall be deposited with the Secretary immediately after reading.

SECTION 4. The deliberations of this Society shall be governed by parliamentary usage as contained in the latest edition of Roberts' Rules of Order, when not in conflict with these By-Laws.

SECTION 5. The Principles of Medical Ethics of the American Medical Association, as contained in the latest edition, shall govern the conduct of members in their relations to each other, to this Society, and to the public.

Essayists will please remember that all papers presented before the Society become the property of the Society and therefore are not to be published or submitted for publication elsewhere than in the DELAWARE STATE MEDICAL JOURNAL.

IF YOU PLEASE

Delegates addressing the House, and members discussing scientific papers will kindly come to the platform and first give their name and city to the steno-typist. Speak slowly and distinctly. Thank you.

MONDAY, OCTOBER 12TH, 1936
MEETING OF THE HOUSE OF
DELEGATES
Hotel Bellhaven
8 P. M.

1. Call to order.
2. Roll Call.
3. Reading of Minutes of Last Session.
4. Appointment of Committee on Nominations.
5. Reports of Officers.
 - a. President.
 - b. Secretary.
 - c. Treasurer.
 - d. Councilors.

6. Reports of Standing Committees.
 - a. Scientific Work.
 - b. Public Policy and Legislation.
 - c. Publication.
 - d. Medical Education.
 - e. Hospitals.
 - f. Neurology.Reports of Special Committees.
 - a. Woman's Auxiliary.
 - b. Cancer.
 - c. Syphilis.
 - d. Tuberculosis.
 - e. Medical Economics.
 - f. Criminologic Institutes.
7. Report of Delegate to the American Medical Association.
8. Unfinished Business.
9. New Business.
 - a. Resolutions.
 - b. Communications.
 - c. Appropriations.
 - d. Approval of Scientific Program.
 - e. Selection of Meeting Place.
 - f. Miscellaneous.
10. Adjournment.

ANNUAL CONFERENCE

of State Secretaries and Editors will be held at the A. M. A. Building, Chicago, November 16-17, 1936. The officers of state and county medical societies are invited.

TUESDAY, OCTOBER 13TH, 1936

GENERAL SESSION

Hotel Bellhaven

9:30 A. M.

9:30 A. M.—Invocation.

Rev. Conrad Harmer, Rehoboth.

9:45—Address of Welcome.

Hon. Daniel J. Layton, Chief Justice of Delaware.

10:00—President's Address: History of Medicine in Delaware.

Joseph B. Waples, M. D., Georgetown.

10:40—Report of House of Delegates.

11:15—Bronchiectasis.

William F. Bonner, M. D., Wilmington.

11:45—Acute Appendicitis: A Study of Cases at the Beebe Hospital.

E. L. Stambaugh, M. D., Lewes.

LUNCHEON

By the

SUSSEX COUNTY MEDICAL

SOCIETY

Hotel Bellhaven

12.45 P. M.

GENERAL SESSION

Hotel Bellhaven

2 P. M.

2:00—Diphtheria Immunization of Children.

Arthur C. Jost, M. D., Dover.

2:30—Facts, Fads and Fancies of Ophthalmology.

John W. Burke, M. D., Washington.

3:15—Diagnosis and Management of Gall Bladder Disease.

T. Grier Miller, M. D., Philadelphia.

4:00—Results of Gall Bladder Examinations by Varying X-ray Technique.

B. M. Allen, M. D., Wilmington.

4:30—Obstetric Anesthesia and Analgesia; Its Effect Upon the Third Stage of Labor.

Thaddeus L. Montgomery, M. D., Philadelphia.

AMERICAN MEDICAL ASSOCIATION**88th Annual Session****Atlantic City, N. J.****June 7-11, 1937**

Dr. Charles Gordon Heyd, of New York,
President.

Dr. J. H. J. Upham, of Columbus, President-
elect.

Dr. Nathan B. Van Eetten, of New York,
Speaker.

PUBLIC MEETING**Horn's Theatre****8 P. M.**

The American Medical Association. Address,
with Motion Pictures.

Austin A. Hayden, M. D., Secretary,
Board of Trustees, American Medical
Association, Chicago.

Cancer Information for the Laity—From the
American Society for the Control of Cancer.
William H. Speer, M. D., Wilmington.

WEDNESDAY, OCTOBER 14TH, 1936**GENERAL SESSION****Hotel Bellhaven****9.30 A. M.**

9:30 A. M.—Some Recent Advancees in
Radiotherapy.

Ira Burns, M. D., Wilmington.

10:15—Diagnostic Features of Some Gastro-
Intestinal Conditions.

Lawrence Rigney, M. D., Wilmington.

11:00—Reports of Clinical Cases.

12:00—Election of President.

LUNCHEON**By the****MEDICAL SOCIETY OF DELAWARE****Hotel Bellhaven****1.00 P. M.****WOMEN'S AUXILIARY****to the****MEDICAL SOCIETY OF DELAWARE****TUESDAY, OCTOBER 13, 1936****Hotel Bellhaven****10.30 A. M.****Prayer**

Greetings from the Advisory Committee,
Medical Society of Delaware.

REPORTS OF OFFICERS

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Public Relations MRS. N. W. VOSS
Revisions MRS. G. C. McELFATRICK
Sewing MRS. J. W. BUTLER

Unfinished Business**New Business****GUEST SPEAKERS**

MRS. ROBERT E. FITZGERALD

Wauwatosa, Wise.

President of the National Auxiliary
MISS ETTA WILSON Wilmington

Delaware Citizen's Association
MRS. R. W. TOMLINSON

Past-President of the National Auxiliary

LUNCHEON**Hotel Bellhaven****12:45 P. M.**

Informal Social Afternoon
Cards and Music

EDITORIAL

DELAWARE STATE MEDICAL JOURNAL

Owned and published by the Medical Society of Delaware. Issued about the twentieth of each month under the supervision of the Publication Committee.

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Articles sent this Journal for publication and all those read at the annual meetings of the State Society are the sole property of this Journal. The Journal relies on each individual contributor's strict adherence to this well-known rule of medical journalism. In the event an article sent this Journal for publication is published before appearance in the Journal, the manuscript will be returned to the writer.

Manuscript should be sent in typewritten, double spaced, wide margin, one side only. Manuscript will not be returned unless return postage is forwarded.

The right is reserved to reject material submitted for either editorial or advertising columns. The Publication Committee does not hold itself responsible for views expressed either in editorials or other articles when signed by the author.

Reprints of original articles will be supplied at actual cost, provided request for them is attached to manuscripts or made in sufficient time before publication.

All correspondence regarding editorial matters, articles, book reviews, etc., should be addressed to the Editor. All correspondence regarding advertisements, rates, etc., should be addressed to the Business Manager.

Local news of possible interest to the medical profession, notes on removals, changes in address, births, deaths and weddings will be gratefully received.

All advertisements are received subject to the approval of the Council on Pharmacy and Chemistry of the American Medical Association.

It is suggested that wherever possible members of the State Society should patronize our advertisers in preference to others as a matter of fair reciprocity.

Subscription price: \$2.00 per annum in advance. Single copies, 20 cents. Foreign countries: \$2.50 per annum.

VOL. VIII SEPTEMBER, 1936 No. 9

REPORT OF A CASE

These columns seldom carry a case report. However, here is one. At first we debated whether to present it here or back in *Immatéria Medica*. But it isn't funny; it's sad, and serious. It obviously did not belong with regular case reports because of its peculiar nature. In the first place, nobody cares about the case—except perhaps his mother and Uncle Sam. And finally, it contributes nothing to medical science. It may contribute something to political science.

One of our members whose veracity is beyond question reports the following case:

A strong, physically capable man, aged 37, complained of pain and soreness just to the left of the sternum over the plicordium. The pain had not been there prior to the last few months, but was becoming more annoying. It bore no relation to meals, never awakened

him at night, and there was no history of exertion. There was no impairment of any former potentialities. Family history, utterly unimportant. Personal history, inconsequential. Past history, negative except that he was able to work only when under a boss' nose, but usually managed to be on a payroll. Physical examination: a ruddy, very well-nourished man of the above-mentioned age, resting quietly in the most comfortable chair in the office, obviously not suffering acutely. He demonstrated the painful area on his chest by pointing with his right hand. The small area was fairly well delineated. Inspection, negative. He claimed it hurt when pressed upon. Pressure atrophy had not set in.

Our colleague performed thorough physical and laboratory examinations and carefully weighed the history. By the way, we have failed to mention the patient's occupation: W. P. A. "worker." And there is the clew. The painful area is the same distance from the ground that a shovel is long! Diagnosis (attention, industrial surgeons): osteochondralgia secondary to constant leaning on a shovel. Prognosis: that funnel-breastedness or a return of the old cobbler's deformity will show a high incidence in the next few years unless the people do something about it.

General considerations: Even if we did not know our colleague's residence, there could be no doubt that he lives near a number of W. P. A. projects. Perhaps he drove out University Boulevard, across Cherry Creek, and glanced at the hundreds of men so close together that if one of them swung an honest pick somebody's head would show a *real* injury. Their cars were all parked on one side of the creek and they on the other. And all through the valley, not a creature was stirring (except one who was on his way to get a drink). You see, the reporter of this case is not the only one who has observed such inertia.

It was months ago that everyone laughed about the W. P. A. "worker" who complained to his boss that he didn't have a shovel. All his buddies had one, but he—poor fellow—had nothing to lean on. The funny side of it

has long since passed, especially when such a "worker" actually seeks medical treatment for contusion unquestionably caused by such leaning. It is your money and mine that has nurtured a generation of chiselers, and it will be our money and our sons' money that will carry them on. America will not permit them to go hungry, but we'd like to see them lean on something other than shovels and our pocketbooks.—Editorial, *Colo. Med.*, September, 1936.

POLITICAL MEDICINE!

The following paragraphs are quoted from a recent editorial in the *Chicago Daily News*:

"In West Virginia it was the state relief administrator himself who wrote a county relief supervisor:

"I hand you herewith a list of doctors in Ohio County. Kindly separate the Democrats and the Republicans and list them in the order of priority so we may notify our safety foremen and compensation men as to who is eligible to participate in case of injury.'"

Besides the obvious comment that this is an insult to the medical profession, and the also obvious suggestion regarding the Vicar of Bray, we are particularly irked by the word "participate." Is the money collected from the many who need it, for the emergency relief of those who need it more, a jackpot? And the part of it to be used for injuries a form of royal largesse?

If there is this much of political manipulation in the matter of legislative measures intended for relief of need—where the need is not debatable, and has no economic answer except legislative relief—how much more, and possibly still more odious, political manipulation there will certainly be in state medicine—where the need is debatable on so many grounds that it is obviously more alleged than real, and the economic answer, in the opinions of many who are well informed, lies to a considerable extent in stopping at the source the tremendous diversion of money into the proprietary channels of self medication!—Editorial, *Indust. Med.*, July, 1936.

NEW MEDICAL JOURNALS

THE JOURNAL welcomes Volume 1, Number 1, of the *Journal of the Connecticut State Medical Society*, which has just appeared, un-

der the able editorship of Dr. Stanley P. Weld, of Hartford. This newcomer among the state journals follows the format and general plan, arrangement and contents of its state associates. The first issue contains 74 pages of text and 17 pages of advertisements, and is dedicated to Dr. James Tate Mason, late president of the A. M. A. Delaware wishes its Connecticut confreres every success in their new venture.

Another baby in its swaddling clothes is *The Child*, published by the Maternal and Child Health Division of the Children's Bureau, U. S. Department of Labor, Washington. It will carry information of health services administered through the Bureau in participation with the states under the Social Security Act. The first two issues deal with maternal and child health and crippled children's services.

MISCELLANEOUS

A Suit Against a Physician

A woman appealed to her family physician for advice as to the proper procedure, alleging that her husband had threatened to shoot her and in connection with the threat had exhibited a revolver.

The doctor brought the matter to the attention of the local judge and this physician and an associate were appointed to examine the husband and submit a report to the judge. On the receipt of the medical report the judge committed the husband to one of the State hospitals for mental diseases for observation. When taken into custody by the police officer for the purpose of delivering him to the hospital, an unloaded revolver was found on the person of the patient.

After several weeks' observation in the hospital the patient was discharged as *not insane*.

The husband has now brought suit against the doctor who was appealed to by the wife, including in the declaration that "the defendant maliciously devising and intending to injure the plaintiff did on the sixth day of May 1933 falsely and maliciously and without any reasonable and probable cause make an application for his commitment to a hospital for the insane."

In the declaration it is further charged

"that the defendant, well knowing that the plaintiff was sane, caused an assault with force and arms to be made upon the plaintiff and caused him then and there to be taken and imprisoned and restrained."

Next comes an interesting feature of the case, especially to physicians, because the doctor carried indemnity insurance with the United States Fidelity and Guaranty Company for his protection in claims for malpractice. This company declines to acknowledge liability in a suit for malpractice in this case with the statement, "You will observe that the claim is that you acted falsely, maliciously and wilfully to have the plaintiff committed" and further "This is entirely different from a charge of malpractice, error or mistake" and reference is made to a decision of the Massachusetts Supreme Judicial Court in the case of *Niver v. Boland* 177 Mass. 11.

The letter of the United States Fidelity and Guaranty Company disclaims any responsibility under its policy for any judgment against the doctor. Even so, the company is willing to have its attorneys conduct the defense, but does not state how much would be charged for this service.

The next reasonable move is for the doctor to consult the proper officers of the Massachusetts Medical Society, under his rights as a member, for the Society will provide legal advice and court service for the purpose of conducting defense when a member is accused of malpractice or illegal transactions in connection with the commitment of persons to institutions for the insane.

To us it seems that the decision of the United States Fidelity and Guaranty Company and of any law rests on the interpretation of words rather than facts, for the doctor in this case was appointed by the court to use his knowledge and experience as a physician in making a diagnosis and he made his report purely as a physician. If his report was unsound or the result of prejudice or enmity it seems reasonable to interpret that as *malpractice*, for Webster defines malpractice as "wrongful or negligent practice or action especially in professional or fiduciary conduct." The doctor was acting in both respects because he was giving a professional opinion

and, on appointment by the court, had definite fiduciary responsibilities. We concede that no layman is competent to quarrel with an opinion of the Massachusetts Supreme Court, but this situation raises the question of the quality of service under insurance policies supposedly protecting physicians in the exercise of their functions, and the doctor should ascertain exactly how far the service is protective.

Editorial, N. E. J. of M., Sept. 17, 1936

Poliomyelitis Control Picric Acid-Sodium Alum Nasal Spray Formula*

Solution A.—Dissolve 1 gram of sodium alum (sodium aluminum sulphate C. P.) in 100 cc of physiological salt solution (0.85 per cent). Turbidity may be removed by filtering one or more times through the same filter paper or Berkefeld filter.

Solution B.—Dissolve 1 gram of picric acid (C. P.) in 100 cc of physiological salt solution (0.85 per cent). (Warming will facilitate solution.)

Mix equal amounts of solutions A and B. This gives a 0.5 per cent solution of each ingredient, which is stable, and it is this mixture which is to be dispensed.

On the appearance of cases of poliomyelitis in the community, spray the nose thoroughly once daily on alternate days for 3 or 4 applications, then once weekly thereafter for the duration of the poliomyelitis season. The spray should be directed upward toward the top of the head.

No substitutes should be used.

The New American Medical Directory

The fourteenth edition of the American Medical Directory has been completed and copies are now available for general distribution.

The directory, with nearly twenty-five hundred pages, is a vast storehouse of information. It contains not only the most complete list available of the physicians of the United States and its dependencies and of Canada, but much additional data which hospitals, libraries and various other institutions, as

*Public Health Reports, 51: August 24, 1936.

well as individuals, will find useful and readily available. The directory is the only nationwide register of physicians in which the extensive data on medical education, licensure and society affiliations have been verified.

The 1936 edition contains 183,312 names, or 4,796 more than were in the previous edition issued in 1934. The names of 13,157 physicians have been added and 7,684 names have been removed because of death. More than 70,000 changes of address have been made, in addition to thousands of changes in society affiliations, teaching positions, specialties and office hours.

In this edition, thirty-two states show an increase in the number of physicians; New York leads the list with 1,201, followed by California (369), Pennsylvania (281), New Jersey (262) and Massachusetts (249). A slight decrease in the number of physicians is shown in Missouri, Georgia, Kentucky, Tennessee, Oklahoma, Alabama, Indiana, South Dakota, Maine, Vermont, Mississippi and New Hampshire. When the thousands of changes of location are analyzed they seem to show a noticeable migration of physicians to the larger towns in the South Central states, a trend that was previously present also in some other sections of the country.

The first section of 221 pages in the new directory includes the constitution and by-laws of the American Medical Association, the Principles of Medical Ethics, and a list of meeting places of the annual session of the Association since the first one in 1847, with the names of the President installed during each meeting. In this section also are lists of training, the medical libraries, the medical journals published in the United States, Canada, the Philippine Islands and Puerto Rico, the names of medical officers of the various government services, the national organizations for the various specialties with the names of their members, the membership of the new examining boards for the specialties, the medical schools in the United States and Canada with a brief history of each, and the members of the National Board of Medical Examiners.

The second section is arranged by states.

There is published under each state the medical practice act, the members of the board of medical examiners, members of the state board of health, county and city health officers, and officers of the state, district and county medical societies. Following this is a list of 7,220 hospitals, sanatoriums and related institutions arranged by towns, with the name, location, bed capacity, superintendent, and type of patients treated in each institution. Then, arranged by towns, comes the great list of physicians, giving the year of birth, school, year of graduation and license to practice, membership in the state society and special societies, professorships, and Fellowship in the American Medical Association. The home and office addresses and office hours also are given for physicians in towns of more than 10,000 population.

A new feature in this edition is a key letter showing that a physician has been certified as a specialist by an approved examining board. Several of these boards have been approved by the Council on Medical Education and Hospitals since the directory went to press. The next edition therefore will contain a more complete list of certified specialists. An especially interesting feature of the 1936 edition is the list of American physicians temporarily located in foreign countries.

The third section, of 525 pages, is an alphabetical index of the names of 183,312 physicians; and practically every name is followed by the name of the city and state, thus indicating where in the directory detailed information about the individual physician may be found.

The bringing to completion of the fourteenth edition of the American Medical Directory has been a monumental task, in the pursuance of which thousands of individuals, societies, licensing boards, medical colleges and other organizations have co-operated. For their ready co-operation and assistance the American Medical Association is thankful and deeply appreciative.—*J. A. M. A.*

Insurance Medical Directories

The attention of all members is called to the following resolution adopted by the Society at the Hot Springs meeting April 29:

“Whereas, certain commercial interests are

publishing medical directories, listing physicians by specialty and otherwise, as available for insurance and compensation work, and other professional services, and

Whereas, participation by listing in these lay publications merely serves for the profit of the promoters, and is furthermore technically indirect solicitation of patients.

Therefore, be it resolved, that the Arkansas Medical Society condemns these practices as unethical and forbids its members to continue listing their names in such directories, and

Be it further resolved, that the Arkansas Medical Society requests the House of Delegates of the American Medical Association to take similar action."

The resolution was presented to the House of Delegates of the American Medical Association and referred to the Judicial Council for study. The Judicial Council approved the resolution and recommended its adoption, which the House of Delegates did at the session of May 14th, 1936.

The attention of our members has been previously called to the activities of these directory publishers. As is often the case, individual physicians felt that they might incur a loss if they removed their names from such directories while other members retained their listing. With this thought in mind, the above resolution has been adopted. The practice of so listing is declared unethical; no individual member may now feel that should he remove his name that another physician will accept that listing. The benefit is direct to these physicians in the fees saved; the loss is entirely the promoter's.

Some idea of the financial gains involved in the publication of these directories may be understood when we state that one directory now on our desk contains the names of approximately 5,000 physicians. Ninety-two Arkansas physicians are listed in the three directories available to The Journal. The fee charged for listing in this one directory is \$15.00 per annum. A liberal estimate of the cost of publication and distribution is \$15,000. The balance, \$60,000, is presumably divided between the promoter and his solicitors. Verily, a most altruistic motive prompts the publication.—*Ark. State Med. Jour.*

Index Catalogue of the Library of the Surgeon General's Office

Under date of May 4, 1936, Major Edgar Erskine Hume, librarian of the Army Medical Library, announced to the Surgeon General the completion of the first volume of the fourth series of the *Index Catalogue* of the Library. Volume 10 of the third series appeared in 1932, and publication has been suspended in the intervening time. The history of the publication is briefly reviewed in the introduction to the new volume of the new series. When it first appeared, the *Index Catalogue* was unique as the only attempt to index the important medical literature of the world. As the Army Medical Library received a greater number of periodicals and more books, pamphlets and other medical publications than any other medical library capable of issuing such a publication, the *Index Catalogue* most nearly approximated a complete catalogue of medical literature.

The *Index Medicus* was founded in 1879 and, as our readers know, was subsequently taken over by the American Medical Association and is now issued as the *Quarterly Cumulative Index Medicus*. To some extent there is a duplication of the work necessary for preparing the *Quarterly Cumulative Index Medicus* and the *Index Catalogue*, though the claim is made that the *Index Catalogue* is far more comprehensive than the *Index Medicus*. Incidentally, the cost of issuing 1,000 copies of one volume of the *Index Catalogue* is estimated to be \$33,000, or \$33 per individual volume.

In presenting this new volume, certain changes have been made which are improvements in presentation of the material. For example, volume numbers are in Arabic numerals instead of Roman, unnecessary punctuation has been avoided, and there has been a shortening of inclusive pagination. The same classification is followed as has been used since the beginning of the first series, although of course new knowledge has made necessary new subheadings. Nomenclature has been improved by avoiding eponyms, although in some instances, as in Addison's disease, this has not been possible. It has been estimated that the changes are sufficient to save approximately one-fifth of the available

space. The Army Medical Library receives 1,509 periodicals; the *Quarterly Cumulative Index Medicus* receives some 1,400. Users of the two indexes will readily be able to determine for themselves which method of indexing has the greater facility. By its very nature the *Index Catalogue* is invariably far behind the *Quarterly Cumulative Index Medicus* in making available references to current medical periodical literature. However, the *Index Catalogue* makes available in one volume all the material up to the time of its publication.

Users of the *Index Catalogue* should be under no illusion as to the extent of material covered. It is not possible, and certainly not worth while, to attempt to index every article appearing in every one of the 1,509 periodicals received by the Army Medical Library, and it is quite obvious by reference to the *Index* that the editors have not attempted a complete indexing of this material. This is the system that has been followed by the *Index Catalogue* and the *Quarterly Cumulative Index Medicus* as well as the *Index Medicus* from the first. The compilers of the *Index Catalogue* are to be congratulated on their editorial judgment.

Notwithstanding the minor criticisms here offered, the *Index Catalogue* is one of the most useful works of reference available in the field of medical bibliography. The economically minded may estimate that the completion of the alphabet in this manner will require anywhere from ten to twenty years and will cost approximately \$400,000. During the same period the *Quarterly Cumulative Index Medicus* will also be making available an index of the periodical literature of medicine at a cost of approximately \$40,000 a year. There will be considerable duplication of work which might in some way be avoided. It remains for medical leadership, both governmental and extra-governmental, to work out some plan whereby this may be done.—*Jour. A. M. A.*, September 12, 1936.

New Methods of Scientific Publication and Bibliography

The dissemination of new scientific knowledge is second in importance only to research itself. The results of research cannot be of full value in the advancement of science unless they are made known. Publication is the first step in the dissemination of knowledge; the next step is the incorporation of published matter into the bibliography of the subject with which it deals. At present scientific journals cannot always publish all the worthy material offered and in many cases more prompt publication than now possible may be desirable; also in certain branches of science the bibliographic services are inadequate and may become more so. Fortunately the last statement does not apply to medicine, because the bibliography of the older literature is well covered by the *Index Catalogue* and that of the current literature by the *Quarterly Cumulative Index Medicus*, published by the American Medical Association. A comprehensive and ambitious plan to improve and expand the facilities for scientific publication and bibliography has been inaugurated by Science Service. The new enterprise will center in the Documentation Division of Science Service, for the work of which the Chemical Foundation has given a grant of \$15,000.¹ Documentation has been defined in the broad sense as "the assembling, classification and distribution of documents of all sorts in all fields of human activity." By way of enlarging the facilities for scientific publication the Documentation Division has developed photographic mechanisms for the prompt issuance of papers and monographs that existing periodicals in various branches of science cannot publish promptly if at all. The plans are based on co-operation with existing periodicals, societies and institutions. Microfilms are made of manuscripts, from which prints can be produced for reading in special machines as well as projection prints for direct reading and general distribution. The films will be permanent and, as orders can be filled as received, no storage of printed stock will be necessary. The process just outlined is used also for copying printed and other matter at small expense. The process is already in use in certain libraries for research purposes and in

place of inter-library loans. Thus the Bibliofilm Service of the U. S. Department of Agriculture is said to give excellent results. Eventually it may prove practicable and economical to publish certain periodicals by microphotographic methods. It is possible to reproduce by microphotography say 150 or more pages of ordinary typescript on an area 3 by 5 inches in extent; from such negatives, prints can be made for reading machines as well as for direct reading. Special attention is given to the development of these methods in co-operation with Dr. R. H. Drager of the medical corps of the navy. The outlook promises well for the development of new and helpful methods of reproducing reading matter on a large scale. It will be of interest to learn how the problem will be solved of reproducing illustrations, which are such an important feature in medical and other biologic literature.

Science Service is interested also in scientific bibliography. It dreams of a complete, centralized international bibliography, of a master file of cards punched and marked to actuate an assorting mechanism to which is linked a duplicating machine from which bibliographic lists can be delivered instantly to order as desired. Assuming the scheme to be practical, what shall be done with past and present bibliographies? No attempt will be made to discuss details at this time, but the following statement of proposed bibliographic investigations may be of interest: the extent and adequacy of the bibliographies of the scientific literatures of the past; current bibliographic services and the possibility of their co-operation in new plans; the methods of classification; bibliographic mechanisms (including devices for filing and finding, microphotographic cameras, printers); the problems of language and copyrights; methods of international co-operation. Here is a huge task and "the possible inauguration of the bibliographic project is a matter of years and considerable expenditure of money."—*Jour. A. M. A.*, August 1, 1936.

"Subenon" For Arthritis and The American Chemical Society

For several years the annual sessions of the American Chemical Society have been accompanied by extraordinary publicity in the lay press concerning new chemical discoveries applicable in the field of medicine and particularly for the treatment of disease. Each year has seen several disappointments associated with the subsequent fate of the widely heralded remedies. Occasionally, of course, some of the preparations thus announced have found a certain field of usefulness. The medical profession has thus far refrained from criticizing this interference in its field. This year, however, even before the opening of the annual session of the American Chemical Society, newspapers throughout the United States carried a story, emanating apparently from the publicity department of the American Chemical Society, indicating that a new specific had been developed for the treatment of rheumatism and arthritis. Some press associations which have been consulting the headquarters of the American Medical Association relative to press items in the field of medicine immediately made contact with authorities in the headquarters office to determine whether or not these stories were well founded. The item submitted to the press stated that "a compound which curbs arthritis, economically the most devastating of all chronic diseases, was reported by Dr. Herman Seydel (President Seydel Chemical Co., Jersey City, N. J.)." It was said that "the new compound, involving the medicinal application of benzoates, has proved effective in clinical tests covering two years at the Jersey City Medical Centre." Furthermore, Herman Seydel, Ph. D., reported that "in this calcium double salt of benzyl succinic and benzoic acids we offer the solution of an age-old problem. It remains for the medical profession to adopt it and employ it properly." Thus the speaker to appear before the American Chemical Society put the medical profession of this country squarely "on the spot" with a demand that it use his proprietary remedy. The item was, of course, much more extensive, proceeding finally to the rather humorous point at which "Dr." Seydel pointed out that his remedy worked "by treatment designed to

1. Davis, Watson: Microphotographic Duplication in the Service of Science, *Science* 83:402 (May 1) 1936; Activities of Science Service in Scientific Documentation, *J. Soc. Motion Picture Engineers* 26:77 (July) 1936. Drager, R. H.: Some Technical Aspects of Microphotography, *ibid.* 20:84 (July) 1936.

better the body humors." He explained "humors" by pointing out that "some modernists in medical science substitute for the 'humors' the 'bacterial flora of the intestines.'" If this is science, Heaven help the scientists!

The real explanation of the usefulness of his product seemed to be, according to "Dr." Seydel, "the role played by benzoic compounds in the detoxication of the body . . . since it successfully removes waste matters from the body humors and is itself eliminated as either hippuric acid or a hippuric acid derivative. Hence benzoic compounds should have a decided advantage over other compounds in the treatment of conditions that arise from, or are controlled by, the gastrointestinal tract." The secret behind this is, of course, the fact that the Seydel Chemical Company is a manufacturing organization which specializes in the manufacture of "benzoic compounds."

Naturally this extraordinary announcement in the press stimulated a flood of inquiries addressed to the American Medical Association, the American Chemical Society and "Dr." Seydel personally as to where this new specific might be secured. At least one inquirer was told over the telephone that the product could be secured by calling for it under its proprietary name—Subenon¹—at any of the establishments of a widely known chain of drug stores.

In his statements "Dr." Seydel mentioned a favorable experience with the treatment at the New York Postgraduate Hospital. The superintendent of that institution, W. B. Talbot, telegraphs:

We protest reference to New York Postgraduate Hospital in newspaper report of Herman Seydel. Stop. We used experimentally his product subenon but found it useless in arthritis. Stop. No favorable reports given out from this hospital about subenon.

Had the publicity associated with "Dr." Seydel's exploitation of his product gone directly from the Seydel Manufacturing Company to any of the better press associations or newspapers of the United States, it would promptly have found itself—as merely a sheet of advertising material seeking for

free publicity—in the editorial wastebasket. As it came to newspapers with the sponsorship of the American Chemical Society, a well known organization presumed to be composed of scientific men subject to the usual ethics which control scientific workers, press associations and newspapers cannot be condemned if they failed to recognize the definitely commercial background and effect of this item. Neither can thousands of unfortunate sufferers from arthritis be condemned if in response to this item they demand of their physicians that they be given opportunity to test this unestablished drug. But in these circumstances the sufferer from arthritis is the guinea-pig and "Dr." Seydel and his company are the financial gainers with the American Chemical Society as their unpaid agent.

When the item appeared in the newspapers a telegram was sent by the Director of the Division of Drugs, Foods and Physical Therapy of the American Medical Association and by the Editor of *THE JOURNAL* to the president of the American Chemical Society pointing out the circumstances involved in this case and protesting the use of the American Chemical Society for aiding the premature and unethical exploitation of this proprietary. It was suggested that proper officials remove the paper by "Dr." Seydel from the program of the American Chemical Society. This, as we go to press, the president of that society has refused to do. The American Chemical Society cannot dodge its responsibility in this case. It is neither within its province nor within its competence to give critical judgment on the treatment of disease. If it wishes to maintain the respect of the medical profession and the public, the American Chemical Society cannot permit itself to be used as an agent for unestablished proprietary remedies in the exploitation of the sick.—*Jour. A. M. A.*, September 12, 1936.

1. Subenon is claimed to be a calcium double salt of benzyl succinic and benzoic acids. In November 1935 Seydel declared his intention to submit the product to the Council on Pharmacy and Chemistry. The product was already commercially available at that time. It is not, therefore, either new or of established value—facts which the American Chemical Society might have taken into consideration before permitting widespread exploitation under its sponsorship. The product has not yet been submitted to the Council.

Re: Plumbing In Public Schools

Resolution adopted by the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association, June, 1936.

Whereas, at the annual meeting of the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association held at St. Louis, Mo., February 25, 1936, a presentation was made by Major Joel I. Connolly, of the Chicago Board of Health, relating to possible health hazards in apparently modern plumbing installations in public buildings, and

Whereas, it was manifest in the said presentation that plumbing fixtures which have been generally regarded as safe and sanitary in design may in fact constitute a real and serious health hazard by reason of the danger of back siphonage and contamination of water supply mains, and

Whereas, the probability exists that such apparently modern, safe and sanitary plumbing installations may exist in numerous school buildings in the United States, and

Whereas, the existence of such apparently safe, modern and sanitary plumbing installations and reliance upon them brings about a sense of false security, therefore, be it

Resolved, by the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association that this Committee apprehends the possibility of danger to the health of school children from apparently safe, modern and sanitary plumbing installations in school buildings, and be it further

Resolved, that the said Joint Committee earnestly recommends to all school boards and school executives that surveys be instituted by competent engineers to ascertain whether or not the danger of back siphonage and consequent pollution of water supply mains exists in plumbing installations within their jurisdictions, and that such surveys be fol-

lowed by prompt corrective measures, and be it further

Resolved, that these resolutions be offered for publication to all journals dealing with public health, health education and general education.

International Assembly

To the Medical Profession of America:

The Inter-State Postgraduate Medical Association of North America extends a very cordial invitation to all physicians in good standing to attend the International Assembly of the Association to be held in the City of St. Paul, Minnesota, October 12 to 16, inclusive, 1936.

An unusually interesting clinical and didactic program including all branches of medicine and surgery and the specialties has been arranged by the Program Committee.

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DAVID RIESMAN, M. D.,
President.

GEORGE W. CRILE, M. D.
Chairman, Program Com.

Graduate Fortnight

The Ninth Annual Graduate Fortnight of the New York Academy of Medicine will be held October 19 to October 31, 1936. The general subject will be "Trauma, Occupational Diseases, and Hazards." Evening sessions will be held at the Academy, 2 East 103rd street, and the clinical programs will be held in hospitals. The profession generally is invited to attend. The registration fee of \$3.00 admits to all features.

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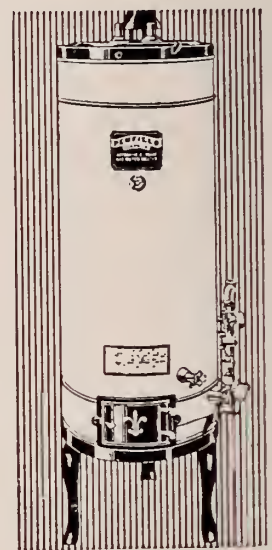
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VITAMINS IN CANNED FOODS

IV. VITAMIN B₁

• The story of vitamin B₁ is quite long and involved. Properly, it has been fully covered at some length in authoritative dissertations on the vitamins (1).

The original vitamin B of Eijkman and of Funk, while definitely possessed of antineuritic potency, is now known to be of a complex nature. Between 1919 and 1926, the vitamin B complex was resolved into vitamins B (B₁) and G (B₂). Subsequent work has indicated the existence of other vitamins in the complex, whose chemical natures or relations to human nutrition are not as yet clearly understood.

As a direct result of many researches on vitamin concentrates, the chemical identity of the crystalline antineuritic factor has recently been described as a derivative of 6-aminopyrimidine (2).

It has been known for many years that vitamin B₁ may be destroyed by heat. In the canning procedure, a number of heat treatments of food may be involved, especially in the thermal "processing" of the product to insure its preservation. In the "process", many foods are subjected to a heat treatment after sealing in the can, to destroy spoilage organisms which may be present on the raw material. In other cases, the food is filled into the cans at a sufficiently high temperature to obtain the same result. Therefore,

the question of the effect of the canning procedures on vitamin B₁ frequently arises.

The times and temperatures necessary for the processing of canned foods are governed by a number of factors, important among them being the pH of the food itself. Highly acid foods require only short heat processes at the temperature of hot or boiling water to destroy spoilage organisms. The so-called "non-acid" or "semi-acid" products require higher temperatures — usually 240° F. (116° C.).

As might be expected, acid foods have been found to suffer only a slight loss of vitamin B during canning (3).

The degree of retention of vitamin B₁ in the non-acid foods is not as high as in the acid foods. (4).

This is partly due to the heat treatments accorded them and possibly also to their low acidity, since the vitamin is more stable in acid media.

The facts in the case may be summarized briefly by the statement that commercially canned foods may be depended upon to supply vitamin B to extents consistent with the amounts of the vitamin originally present in the raw materials from which they were prepared. Because of their widespread use, canned foods contribute a notable amount of vitamin B₁ to the American dietary.

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(1) Vitamins: A Survey of Present Knowledge
Medical Research Council, Special Report
Series, No. 167, 1932. His Majesty's Stationery Office, London

The Vitamins
H. C. Sherman and S. L. Smith
1931 Am. Chem. Soc. Monograph,
2nd Edition

(2) 1935. J. Amer. Chem. Soc. 57, 1751

(3) 1932. Ind. Eng. Chem. 24, 457

(4) 1932. J. Nutrition 5, 307

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N. Y. State Jour. Med., June 1935, Vol. 35, No. 11
Arch. Otolaryngology, Mar. 1936, Vol. 23, No. 3, 306-309

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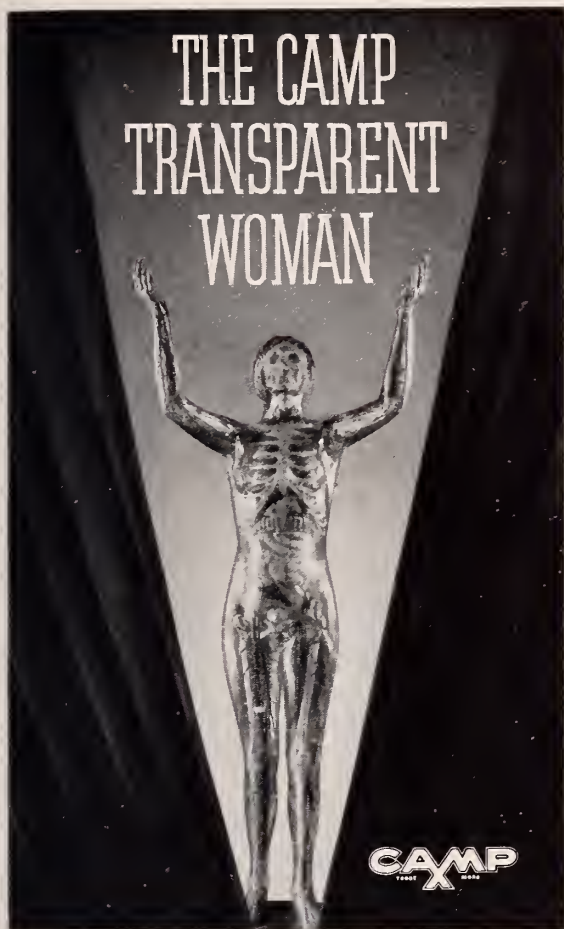
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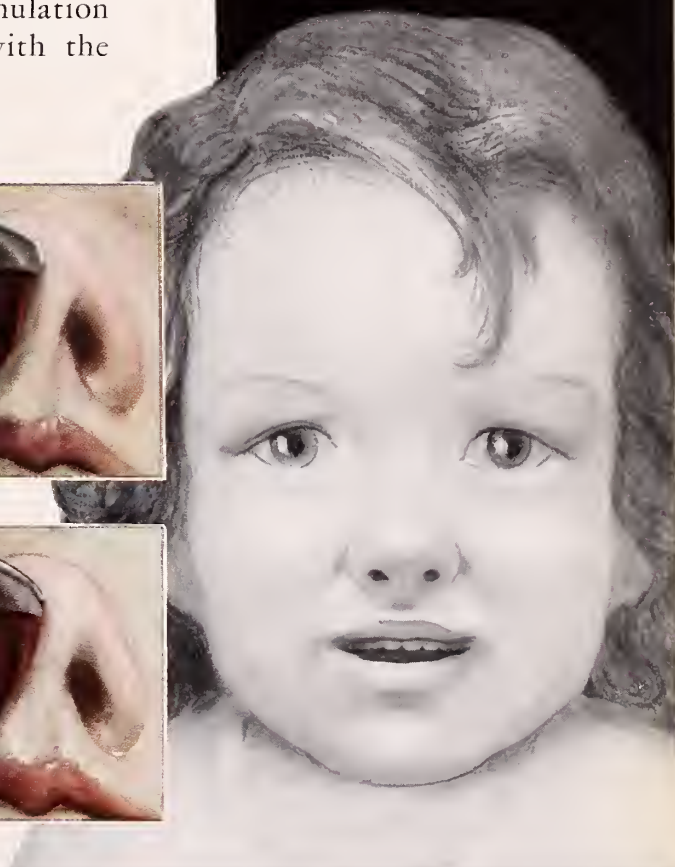
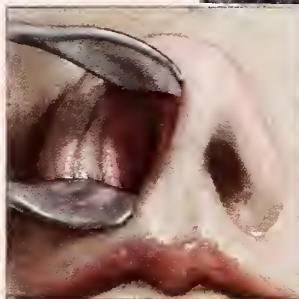
For Children's Colds

FIG. 1. J.M.C. White, female, age 4. June 5, 1936. Acute rhinitis.

11:40 A.M. Two inhalations of Benzedrine inhaler.



FIG. 2. 11:50 A.M. Maximum shrinkage evident.

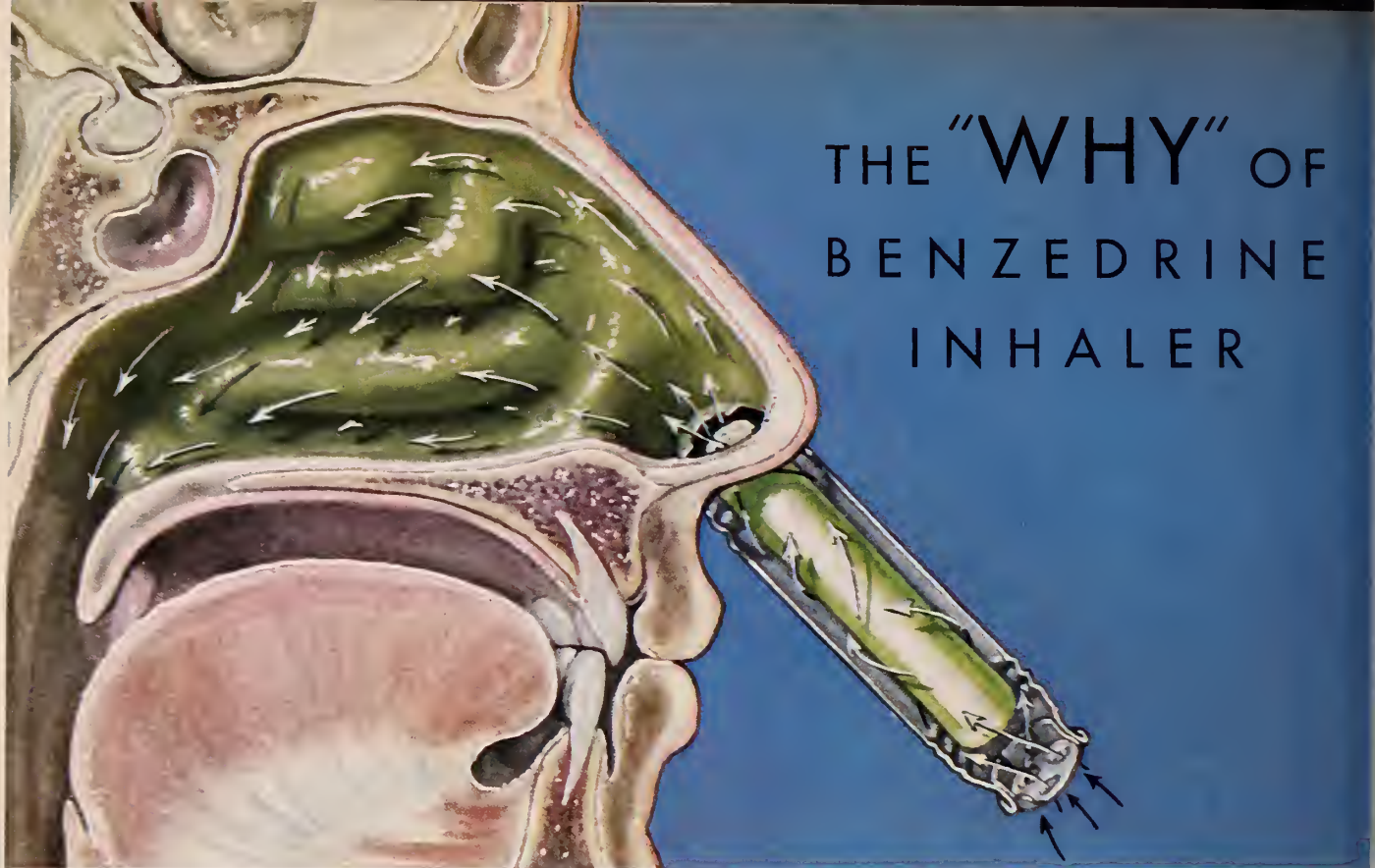


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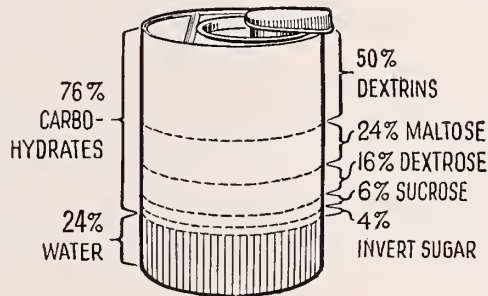
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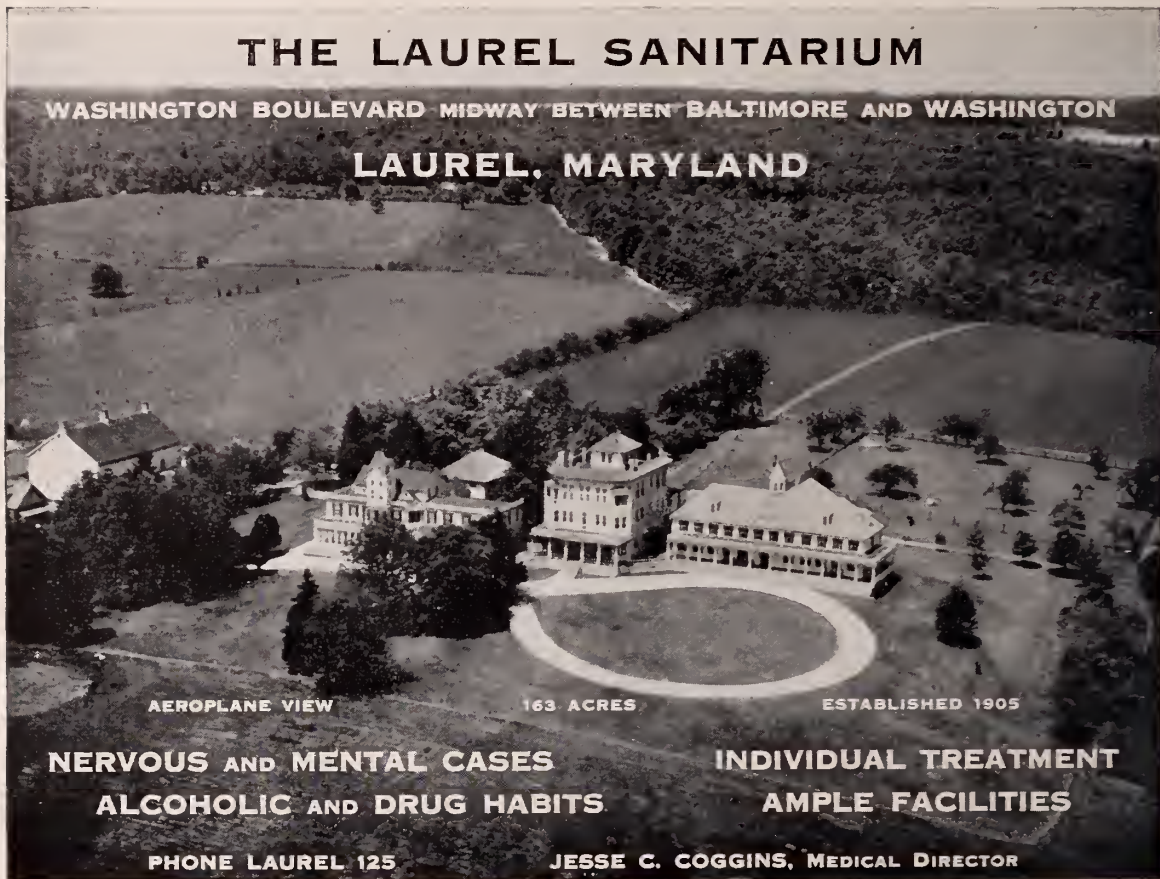


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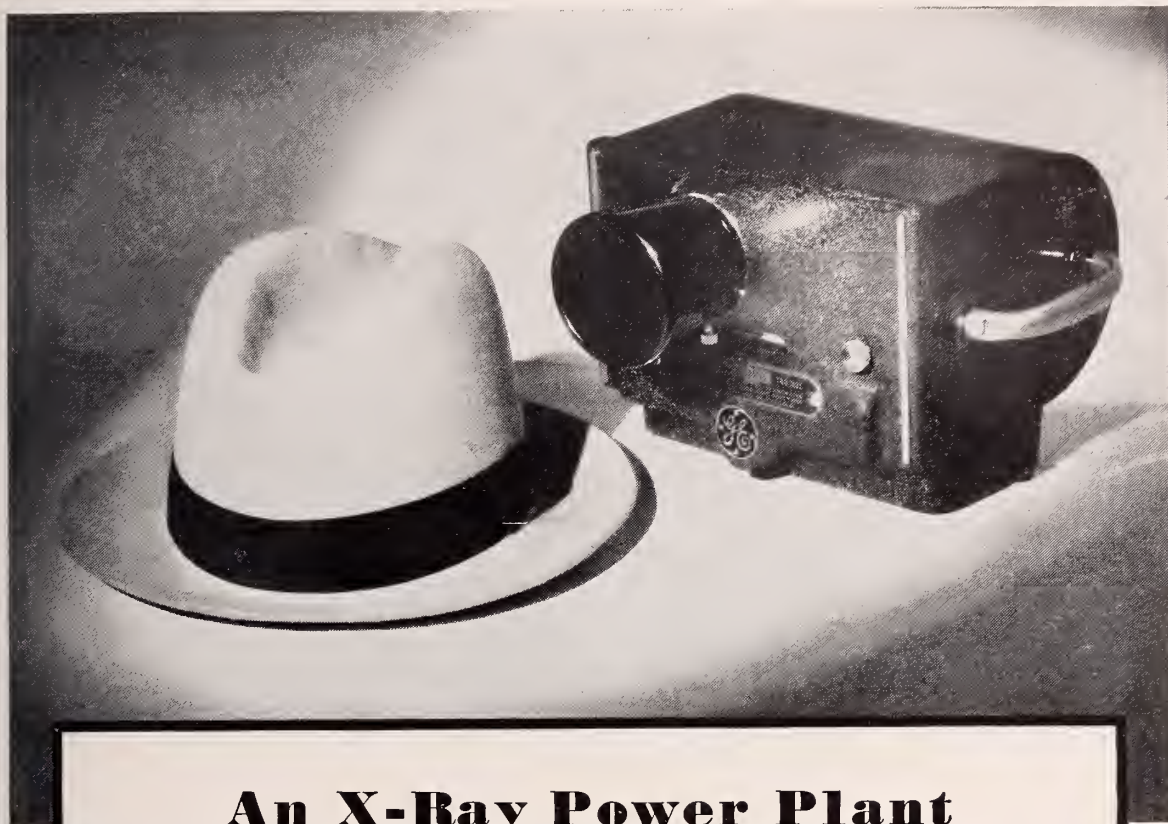
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HISTORY OF MEDICINE IN DELAWARE*

JOSEPH B. WAPLES, M. D.
Georgetown, Del.

I never knew how sadly the early history of medicine in Delaware had been neglected until I started this paper. I suppose the reason was that most of the medical aid was given by old women and by men who had never studied medicine but resorted to those home remedies that we still find traces of in the older country families. Yet there were a few doctors whom we find mentioned among the early settlers.

Dr. Tyman Stidham landed at New Castle, then called Fort Cassimer, May 21, 1654, and later moved to Fort Christina, now within the limits of Wilmington. He died in 1686. Dr. John Rhodes was among the earlier settlers at Lewes, but was killed by the Indians within the first year. Then Dr. John Jardine settled in Kent County in 1675, and Dr. Charles Haynes landed at Lewes.

As there were, of course, no medical schools in this country these good pioneer physicians acted as preceptors to many and by so doing perpetuated the medical treatment in this state for many years to follow. Among the next group of physicians were Dr. Moses Marshall, 1758-1813 and Dr. William Baldwin, 1779-1819 and Dr. William Darlington. These doctors lived at a time we might call the botanical era, as they were botanists of some note and busily sought plants, experimented with them and interchanged their findings with the physicians across the sea. These experiments and medical claims for certain plants brought about a bloodless war between those claiming and others disclaiming the therapeutic action and properties of many of the extracts.

It was about this period that the physicians began to realize how necessary it was for them to get together at least once a year, as there were no journals, to discuss the self-acquired knowledge obtained by the experimentation and the practice of the different doctors.

On February 3, 1789, an act incorporating the physicians of Delaware was passed by the General Assembly. A copy of the act appeared in the Delaware Gazette in April naming twenty-seven physicians, all doctors in the state at that time, as incorporators. These physicians met in Dover on the following May 12, just 12 days after the inauguration of Washington, and organized our present State Society, the third of its kind in America, by electing Dr. James Tilton, president; Dr. Jonas Preston, vice-president; Dr. Edward Miller, secretary; and Dr. James Sykes, treasurer.

These first members were men with souls and realized the real benefits of meeting with their colleagues, as was shown by their interest in forming a society at a time when the means of transportation was by horseback over very bad roads. I wonder what our attendance would be today were we to have that mode of travel.

I would be going amiss were I not to mention some of our first members and their deeds. Our first president, Dr. James Tilton, was born in Kent County in 1745 and was educated at Nottingham Academy in Maryland. He became interested in medicine, and as his widowed mother was financially unable to send him to the old country he apprenticed himself to Dr. Charles Ridgely of Dover. A few weeks or months later there was started a medical school at the college of Philadelphia, now the University of Pennsylvania, with Dr. William Shippen as professor of anatomy and surgery, and Dr. John Morgan as professor

*Presidential address, read before the Medical Society of Delaware, Rehoboth, October 13, 1936.

of medicine. Dr. Tilton, after serving a short time with Dr. Ridgely, entered the new medical college and graduated with the first medical graduating class and was awarded the degree of Bachelor of Physic. He then returned to Dover and began the practice of medicine but continued to study until in 1771 when he went back to Philadelphia to receive the degree of Doctor of Physic.

At the outbreak of the Revolutionary War he joined the Army with the rank of lieutenant of infantry, and soon was made surgeon. In this position he saw men die by hundreds, in overcrowded and poorly ventilated hospitals, in fact more died with disease than bullets.

He reorganized the hospitals and built log cabins and tents, well ventilated and clean, and placed six sick men in each. This soon corrected the physical condition of the sick and saved the Army from destruction by disease. At the end of the war Dr. Tilton returned to Dover for awhile but his failing health forced him to move to Wilmington in retirement until the War of 1812, when he was called to be placed as the first Surgeon General of the Army. In 1814 he published in general orders "Regulations of the Medical Department." In 1815 he returned to Wilmington hampered by a malignant tumor which made it necessary to amputate his leg at about the age of 70. He underwent the excruciating pain of amputation, as there were no anesthetics, and recovered. The remainder of his life was passed in retirement and he died May 14, 1822.

Dr. Edward Miller, our first secretary, was born near Dover in 1760. He was educated at Newark Academy, now the University of Delaware. In 1796 he moved to New York, and with the Doctors Mitchell and Elihu Smith published the first medical journal, "The Medical Repository." Dr. Miller is best remembered for advocating the use of Peruvian bark in yellow fever and malaria, as well as the drinking of plenty of water in fever cases. He died in 1812.

I have already given much time to these two great men and can only mention a few of the other honored physicians: Dr. Jacob Jones, better known as Commodore Jones, commander of the Wasp; Dr. Macdonough,

father of Commodore Macdonough; Dr. Charles Ridgely, outstanding physician of Dover; Dr. Joshua Clayton, twice Governor of the state and once U. S. Senator; Dr. Joseph Hall, prominent physician of Lewes, born 1742; Dr. Nicholas Way, of Wilmington, born 1750; Dr. Henry F. Askew, born 1805, leader of his profession in Delaware, was president of the American Medical Association, and died 1876; Dr. James B. Lofland, born 1793, located in Milford, died in 1852; Dr. Robert R. Porter of Wilmington, born 1811, and died 1876; Dr. Lewis P. Bush, born in Wilmington 1812; Dr. William H. Wolf of Milton, preceptor to many and the first president of the Sussex County Medical Society; Dr. William Marshall, grandfather of Doctors Williams and Samuel Marshall of Milford, was the first secretary to the Sussex County Medical Society; Dr. Hiram R. Burton, of Lewes, served in Congress; Dr. Willard Springer, founder and first president of the New Castle County Medical Society; Dr. Peter W. Tomlinson of Wilmington. Many others should be mentioned if time permitted. We, most certainly, must look back on these men with great admiration when we think of the period in which they lived. These early physicians not only mixed their compounds but extracted the ingredients from herbs. They also made many surgical instruments to meet their immediate demands.

In my childhood I remember so well visiting homes with my father and having him call for a knife and plate for mixing his medicines and making pills. These men, I dare say, were much better versed in *materia medica* than we are today. Think, too, of their means of travel—horseback or horse and buggy over bad roads—in comparison with our automobiles and hard surfaced roads. I, like many here today, experienced country practice before automobiles came into general use and can appreciate my predecessors in general practice.

At the Centennial meeting of our State Society in 1889, it was suggested by the president, Dr. W. T. Skinner, that each county have a society and hold monthly meetings. Antedating this by 26 years, the Sussex County physicians met in Georgetown, December 15, 1863 and organized the Sussex County

Medical Society by electing Dr. William H. Wolf, of Milton, president and Dr. William Marshall, secretary.

The New Castle County Medical Society was organized in 1901. Dr. Willard Springer was elected president, and Dr. Joseph W. Bastian, secretary.

I was unable to find the date of the beginning of the Kent County Medical Society. Nevertheless, all three are active.

The history of our State Society should be a real stimulus to all of us to put our shoulders to the wheel, and to keep our Society as good as it has been or even better by showing more interest and better attendance.

WHY AM I A DOCTOR?*

FLOYD S. WINSLOW, M. D.**

Rochester, N. Y.

Why am I a doctor? Did you ever ask yourself this question? Perhaps it will not be amiss, once in a while, if we examine this basic question. It will be good for us to indulge in what might be called a "periodic self-examination."

Certainly we are not doctors because of the money that is in it. Generally speaking, our companions of early years who selected business pursuits have outstripped us in gathering together the collection of objects which represents monetary success. Why did we go into medicine? Why do we stay in medicine? Why do we live for, fight for, and sometimes die for medicine?

Glory? Where is the romance in our pursuit, for those who follow it? It is said that every ship is a romantic object but the one we are sailing in, and it may also be said that medicine has romance for those who do not practice it. We work in the quiet of the sick room, or the hospital, we walk daily with troubled humanity. Our satisfaction can only derive from the knowledge that we have performed our obligation to heal the sick, in this way paying the debt we owe for the accumulated knowledge and experience of the ages which has been made available to us.

Perhaps this feeling of responsibility is an ideal which we do not always reach, but is it any less our ideal? We can say, without fear

of contradiction, that the great majority of doctors are imbued with the purpose to discharge this obligation. And I think the time has come when the public should know, should be definitely told, that the most important thing it should inquire about, when selecting a doctor, is whether he is genuinely interested in his calling, loves his profession, and is not only intent to attain ability as a physician, but feels a responsibility to advance the capacities of the medical profession as a whole. This is, as you know, the main object of medical societies. The man who has such a goal as this in mind as a destiny, is a man who can be fully trusted with the lives of men and women and children.

I will go even further than this and say that I think I stand here facing a group of men who have stood the test of this criterion. In other words, this test of character. You have joined your county medical society. You consider that when you were given the right to practice medicine, you assumed an obligation to do your part to see that medicine, as a profession, preserved its integrity. Now gentlemen, the only way integrity can be attained or retained, is to work for it. When you join your local medical society you work for the integrity of yourself and the group. You render yourself open to the criticism of your peers. You say, in effect, "I intend to behave myself, to put the interest of my patient above my own, to observe all the other provisions of the oath of Hippocrates, in letter and in spirit. And not only do I intend to do this, but by joining the county medical society *I have to do it*—I lay myself open to penalties if I do not."

I think the public should be told that a doctor who is a member of his county medical society is a better doctor on this account. I think a patient should ask his doctor, if he is not a member of the medical society, why he is not a member. It is possible, of course, that a physician may be of the highest rank, and not be a member; there is nothing compulsory about it, but as I go over in my mind the names of the physicians who I find have lived so that their excellence is beyond possible question, I do not think I can name one who is not a member of his county medical society.

*Talk delivered at meeting of the Rochester, N. Y., Eighth District Branch of the Medical Society of the State of New York at Buffalo, October 15, 1936.

**President, Medical Society of the State of New York.

Now if our loyalty to our profession is merely another form of loyalty to society—to mankind—a point comes up which I wish now to mention. The world today is facing deep and important problems. Confusion abides in the minds of men. Quacks are abroad plying their trade in the realm of economics and sociology as well as in that of medicine. Large groups of people are assuming to know that which they do not know. They are contemptuous of the experience of the past, and of the experience of individuals, they decry special skills, they substitute rhetoric for reason. So we have another obligation, just as basic as the medical obligation, and that is a social obligation. We must reach out and interest ourselves in these questions which are quite outside medicine, but which need a generous skepticism to counteract what often seems to be a pathological optimism. We have not repaid our debt to society when we merely heal the sick. In some respects, the well need healing, too. That is to say, if we are not to have all our values, all our superiorities broken down. "One man," Dr. Dooley said, "is not only as good as another, but a damned sight better." There are no experts left. There are only simplifiers. And what are we doing about it?

This is not a matter of partisan party lines: the same kind of thinking is to be found everywhere. The public is coming to believe that it is capable of exercising its opinion, its judgment, on difficult technical problems, with no knowledge, no experience. Further than this, it expresses that opinion in response to a catch-word. It does not even make the effort to think a problem through on a rational basis, using the information, however inadequate, which it has in its possession. These are symptoms of grave danger. Sooner than we think, we may see the complete triumph of mediocrity. And there is only one way in which we can make effectual remonstrance, and that is at the polls on election day. Yet I am told by those who have made inquiry that the proportion of doctors who vote is only one in three. Need I say that this is a disgraceful record? Need I urge you to consider its significance deeply, when so many public policies are formulating which may advance or retard the healing art? You know what vari-

ous candidates stand for, and in general, if not specifically, what type of legislation may be expected of them. Your knowledge, your judgment, is ineffectual unless you vote.

After you have asked yourself why you are a doctor, ask yourself another question, a larger question. Are you a citizen, in fact rather than in name, if you fail to exercise the obligations of a citizen in exchange for its advantages? If we work in our own societies to preserve the integrity of medicine but fail in the larger society of American affairs to preserve the integrity of our civilization, efforts on the one part may easily be frustrated by inaction on the other.

PSYCHIATRIC THOUGHTS

M. A. TARUMIANZ, M. D.*

Farnhurst, Del.

The practice of medicine involves more than the diagnosis and treatment of a disease entity or of a complication of diseases of an organic nature, for every physical case is also a mental case, the type and intensity of the mental symptoms depending upon the temperament of the patient.

Illness which results in a change in the well-being of an individual, as well as, frequently, in the environment may also cause a loss, in certain cases, of the feeling of security which is so essential to the welfare of an individual in avoiding abnormal mental tension. In others, the added attention and solicitation produces within the individual a sense of being protected, resulting in a tendency to return to an infantile level of dependency, thus, in certain patients, producing a desire to prolong the illness which is making it unnecessary for him to face adult life problems. This may become extremely marked where there is an over-solicitation on the part of relatives and attendants. In certain unstable individuals there may now well result the chronic invalidism of a neurosis, the patient by this means unconsciously attempting to escape unpleasant problems of adult life.

Not only do we have affective or purely psychogenic changes, but in many instances also organic illnesses, due to toxic reactions on the brain of the abnormal products of the dis-

*Superintendent, Delaware State Hospital.

ease; or an indirect reaction due to changes in activity of the endocrines. In considering these factors it can readily be seen that mental changes, true at times very slight, must occur in nearly all cases of physical illness. These mental variations must be treated with the physical ailment, not only to relieve the present mental instability but to prevent further and more chronic psychogenic reactions in more or less constantly unstable individuals, resulting from the false environment during invalidism. It is therefore important that every physician, whether in general practice or in a specialty, should understand the fundamental aspect of temperament and personality, to obtain the most satisfactory results of the treatment which they prescribe.

Temperament is that inherent part of the personality over which the individual has no control. Its activities may be directed, but that which individualizes humanity is always present and cannot be changed. For many years four different types of temperament have been described, a classification which still may well be used; viz: sanguine, melancholic, choleric, and phlegmatic. Kretschmer later speaks of two main temperaments, the cyclothymic and the schizothymic, which compare to some degree with the extroverted and introverted personality types of Jung. These manifestations of temperament may be caused directly by heredity or race, or may be due to characteristic endocrine functioning. If temperament is caused either directly or indirectly by individual differences of endocrine functioning it may be necessary that we change our present concepts, for with such a purely physiological basis it may be possible for science to change the temperament of an individual at will. This, however, seems the mere possibility of a rather distant future, and if the possibility were to become a fact it is doubtful if changing the temperament would be a wise procedure. Civilization has "de-individualized" humanity enough, at least superficially, so that it hardly seems necessary for medicine to enter the field, except in such cases where the physical well being of the individual is at stake.

In understanding the individual as a whole an account must be taken of character. Character connotes the presence or absence of will.

The ideal or philosophy of life which each individual possesses either consciously or unconsciously undoubtedly plays an important part in the development of character. These ideals, or religions as they may well be called, are based on environment and education (really a phase of environment), plus the inherent intellectual capacity of the individual which is used in formulating these philosophies from past experience and reading. In the intelligent person it may become something tangible, whether social or anti-social. In the non-intelligent person or unstable individual it may become a behavior pattern which may seem almost inexplicable. With the establishment of these ideals, whether good or bad, which, when accepted by the individual, become a definite part of him, there is a desire for the person to follow them through to obtain mental rest, since a life lived contrary to ideals is one of dissatisfaction. The ability to follow these ideals through adversity determines the strength or weakness of the character. Character has usually been considered as rather a positive trait, being usually described as either good or bad, or we may say that a person has much character or none at all. There are, however, gradations of character as in all other human traits, the amount which the person has at his disposal being determined by the degree of adversity towards his ideal which he must face. In using the term ideal we are not assuming that it must necessarily be social in nature. Thus the criminal may have a strong character if his ideal is one of self power without regard for the rights to others. In fact, the fulfillment of his ideal requires often much more force to carry out than it does in one whose ideals take into consideration the laws and rights of others. So a person may have distinctly asocial ideals, but because of weakness of character be merely a grumbler, since he is unable to face the criticism of society or the punishment of the law. Character is far reaching in the effect, if of strength, since it hews its way through life either to the detriment or good of the rest of humanity. Temperament is felt only by close associates and makes an individual agreeable or disagreeable to live with. Temperament becomes non-important after the death of an individual, but character may become a vital thing casting its

influence through centuries of history. The German ideal that temperament is based entirely on the affective side of man while character is based on the volitional aspect accounts to a great extent for the general usage of these terms. The psychoanalytical concept implies that character is not volitional but is based on heredity and environment over which the individual has no control. Wundt says that character "is a disposition of the will." Mumann says "it is the power to keep the selected motive dominant throughout life." Character and ideals, as stated before, must go hand in hand, since a man's ideals will determine his character. A man of strong character will not deviate in his actions even if these actions may cause him almost insurmountable difficulties.

The determination may not always be admirable. Yet we must consider that a single ideal need not necessarily be carried throughout life, since there may be some change in the motive due to the experiences through which an individual passes. These experiences usually occur in the earlier years when the individual is more pliable and when habits of living are still easily changed.

Personality may be considered as the combination of the character and temperament. Although much has been written about the personality, progress has been slow. Galen and Hippocrates believed that individual characteristics were based on physiological process, a concept which is still being considered by contemporary psychiatry. While the endocrine theory is now held, they discussed the various humors. Even today we use the terms such as "galling" and "splenic" as descriptive terms of personality. When we consider the change that occurs in an individual during the process of certain diseases it is impossible to eliminate certain physiological conditions as the basis of certain psychological changes noted. This, of course, is most markedly noted in the diseases of the endocrines, but yet rather definite and characteristic changes are seen in certain other chronic diseases, such as those of the gall bladder, the stomach, and in tuberculosis. We are all familiar with the dyspeptic outlook on life.

Of great importance, due to the psychoanalytical school, has been the awakening of

interest in the minds of professional people to the importance of mental attitudes towards physical and psychological adjustments. As in all newer theories, various schools have arisen and at times some confusion exists, but in many points there is agreement. We will take time here for only a brief discussion of the three main schools. The teaching of Freud aroused not only the professional but the lay mind and was doomed to fall into a certain disrepute because of the almost sensational publicity which it evoked. Through his work we are told that personality traits are connected with the libido and are altered through conscious or unconscious trauma to this impulse. Symbols, acceptable distortions of non-acceptable impulses, appeared in various unconscious mannerisms, or in dreams, and early the interpretation of dreams was a prominent technic in therapy. However, so many traits were held to be due to the same etiological factor and so little loophole was left for error that in spite of the knowledge which we have obtained it would seem that the inexactness of the teaching keeps it from being scientific.

Jung, although psychoanalytical in his tastes, seems to feel that self-preservation, closely linked with fear, has a great deal more to do with personality development than the libido. The extroverted and introverted types, as abnormal manifestations, are the reactions of the individual to this instinct. Whether the individual reacts in one way or another to the desire for preservation of self may be blamed on heredity, environment, or endocrinology.

The third school of psychoanalysis is that of Adler. He deviates from the other schools by his contention that personality traits and character are based on a "will to power." Organic inferiority in the normal man often results in a striving to overcome the handicap, in an attempt for establishment in the field in which the inferiority exists.

The premises differ as to which of the three desires or instincts is the one which plays a prominent role in determining what the reaction of an individual will be to certain situations as they arise. Why one process should be of greater power than another does not seem to have been clearly demonstrated. It would seem entirely within reason that the

force of these various inherent drives vary with different individuals, probably through hereditary measures either on a racial or physiological basis.

However, Adler's school more so than all others, yet in agreement with all, has brought forth a concept which can readily be demonstrated, and that is the compensatory mechanism. Any student of human nature would be able to demonstrate this many times daily.

We all realize that the contradictory behavior of most individuals can be based on a compensatory reaction. The inherent cruelty of some people shows itself in an oversolicitation, a domineerance, and results in over-cordiality. There is in all people a tendency to hide their real emotional reaction and desires by overacting the opposite of it. This compensatory mechanism may take different forms in different people. It is usually evidenced only to hide such behavior which is more or less antisocial, therefore, it is not necessary for the person who is normally (or subconsciously) tender to behave cruelly to make his adjustment since the mechanism is self-preservative in the social group. Yet we do find it occurring even under such a state, namely, that a person who is overly kind to the point of harming his own personal welfare may to the public attempt to show cynicism and cruelty.

We probably have the most commonly understood types of personality in the extroverted and introverted types of humanity. These compare with Kretschmer's cyclothymic and schizothymic types. Every individual differs to a certain degree from every other in his temperament, and because of this, in his personality. Whether a person is to be extroverted, cyclothymic, or introverted, schizothymic, depends both upon inheritance and environment, with a possibility that environment plays the predominant role. It is true that there are certain cases of schizoid or extremely introverted personalities which it seems impossible to change by any means whatever, and it is also true that children, from a very young age, brought up in an orphanage, brought up under the same environmental factors, show different personality characteristics. Some at times do not react to changes in the environmental factors; how-

ever, it is also true that these cases have not been recognized at an early age and attitudes have become fixed to a certain extent before therapeutic treatment can be instituted. Probably the completely introverted or completely extroverted personality offers extreme difficulty in therapy if we wish to change them. The average individual has characteristics of both in that he is self-sufficient when left alone, but cannot enjoy the group and talk freely without embarrassment. Whether a person is introverted or extroverted, as we usually consider them, depends upon which characteristic dominates in the total personality pattern. The completely introverted or schizoid individual who wishes to be alone at all times, never enjoys companionship of others and who is completely occupied with his own thoughts and day dreams, is fairly rare. Many of this type become psychotic, others become useless individuals, hermits and vagabonds, who add nothing to the well being of the world as a whole.

The completely extroverted individual shows the same picture but in the opposite direction. He is unable to be by himself a moment without extreme discomfort. His attention is so quickly distracted from one thing to another that he is unable to apply himself to any one subject to such an extent that he can successfully fulfill a given task. Adversity is apt to throw him into an extreme degree of depression. When physically ill he will become extremely hopeless, but a slight improvement will quickly encourage him to the point where he will immediately forget about his picture of despair.

The introverted individual is inclined to be more or less apathetic against adversity and it is extremely difficult to arouse him to any interest. The introverted personality is not as apt to develop obvious compensatory difficulties. He only finds his compensation in day dreaming which has no outlet. This day dreaming in which he glorifies himself and satisfies one of the inherent drives, becomes to him more or less of a reality.

The fact that character and personality is frequently recognized by the family physician at an early age, may lead to correction of abnormalities and so prevent serious consequence in mature life.

MENTAL HYGIENE CLINIC

The Mental Hygiene Clinic of Delaware which was established in connection with the Delaware State Hospital in August, 1929, has now found it possible to expand its activities. There are now present on its staff two full-time psychiatrists and one half-time psychiatrist, as well as one half-time neurologist. Three psychologists are present on full service. The staff calls for six social workers, four of whom are present with vacancies for two more. With this increased staff, it will be possible to carry on constructive work in the Clinic as well as in those homes where such is needed. In addition, a neuro-surgical clinic is being held monthly by Dr. Grant of Philadelphia who advises operation and treatment for those cases falling in the neuro-surgical field.

The clinic is interested in four distinct types of cases:

1. Child guidance, where the child is normal but where there is danger of the child developing certain behavior difficulties because the parents are inadequately prepared to meet problems as they arise.

2. School children who are now showing definite behavior problems of an abnormal nature, either anti-social in character or excessive withdrawal from the group. Also, such cases who are showing pre-psychotic symptoms or who present neurological conditions.

3. Adults, both those suffering from psychogenic factors as well as those with definite organic conditions of the central nervous system.

4. Institutional cases, both normal and abnormal, rendering help in the classification of mental abilities and in the preparation for community adjustment later in life.

A new building has been open for the Mental Hygiene Clinic which is separate from the State Hospital. It has a separate entrance, thus avoiding any contact with the hospital proper.

Any psychiatric or neurological case can be treated at any of the clinic centers or at the

Mental Hygiene Clinic building at Farnhurst where special equipment is at hand.

Those patients who are not able to pay a private fee for operative work but who are able to pay a portion of the expense, as well as indigent cases, may be seen at the neuro-surgical clinic after having first been studied by the Mental Hygiene Clinic. Whenever possible, the actual expense for laboratory work will be charged, although the same type of service will be given those who cannot pay. If the physician would state that the fee can be paid when a case is referred to the Clinic, it would greatly facilitate the work as we have no desire to send bills to those who are in a marginal state economically.

The Clinic is interested in behavior problems, particularly in children. In those cases where indicated, intensive therapeutic work will be done to prevent adult maladjustment. To date, because of the limited staff, the Clinic has been unable to do therapeutic work in any except a few picked cases, the greater part of the work being diagnostic in character. From the time of the opening of the new clinic schedule, intensive treatment will be carried out.

In order that future maladjustment or institutionalization can be avoided, the physicians are asked to help in this work and to refer such cases as show definite deviations from the normal, or the parents of such children who are in need of child guidance information.

SOUTHERN MEDICAL ASSOCIATION

Thirtieth Annual Meeting, Baltimore, Maryland, Tuesday, Wednesday, Thursday and Friday, November 17-20, 1936.

Physicians from the East, white members in good standing of their state medical societies, are most cordially invited to attend the Baltimore meeting as visitors. All scientific and social activities are available to registered visitors. No registration fee.

Any physician who would like to have a complete program may secure one by writing to the Southern Medical Association, Empire Building, Birmingham, Alabama.

EDITORIAL

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THE REHOBOTH SESSIONS

The one hundred and forty-seventh annual session of the Medical Society of Delaware was held at Rehoboth on October 12th, 13th and 14th. The program upheld the traditions of our ancient and honorable Society, and was carried out without a hitch. Papers and discussions were above the average, and much interest was evinced in the scientific side of our profession.

The business of the Society was transacted by the House of Delegates with courtesy and dispatch. The main items noted were the satisfactory state of the Society's finances and the need of certain minor changes in the medical practice act, for which a special committee was appointed.

A meeting for the general public was held in the local theatre, with a creditable attendance. Dr. Hayden, representing the A. M. A. headquarters, showed a most interesting and

informative motion picture of the many activities of the home office, and Dr. Speer presented a popular paper on cancer, which was well received.

The Woman's Auxiliary met on the second day and had a large and enthusiastic meeting, under the presidency of Mrs. Lawrence J. Jones.

The social features of the session were much enjoyed and earned for the Sussex County Society, as hosts, the thanks of all who attended. While the record of a few years ago, 70 per cent of our membership, was not exceeded, the attendance was quite gratifying.

The following officers and committees were chosen for 1937: Dr. Charles P. White, of Wilmington, president; Dr. Roscoe Elliott, Laurel, first vice-president; Dr. C. G. Harmonson, Smyrna, second vice-president; Dr. W. M. Speer, Wilmington, secretary; Dr. A. L. Heck, Wilmington, treasurer; Dr. William Marshall, Milford, councillor.

Committee on Public Policy and Legislation: Dr. Samuel Marshall, Milford; Dr. T. H. Davies, Wilmington, and Dr. H. M. Manning, Seaford. The president and secretary are ex-officio members.

Committee on Scientific Work: Dr. U. W. Hoeker, Lewes; Dr. L. J. McCollum, Wyoming; Dr. William H. Speer, Wilmington.

Committee on Publication: Dr. W. E. Bird, Wilmington; Dr. M. A. Tarumianz, Farmhurst; Dr. W. M. Speer.

Committee on Medical Education: Dr. Roger Murray, Wilmington; Dr. Stanley Worden, Dover; Dr. E. L. Stambaugh, Lewes.

Committee on Hospitals: Dr. James Beebe, Lewes; Dr. W. E. Bird, Wilmington; Dr. Henry V. P. Wilson, Dover.

Committee on Necrology: Dr. O. V. James, Milford; Dr. J. D. Niles, Middletown; Dr. W. T. Jones, Georgetown.

Dr. Stanley Worden of Dover was elected delegate to the convention of the American Medical Association, with Dr. James Beebe of Lewes as alternate.

Wilmington was selected as the next meeting place for the Society, on the second Monday of next October.

THE PRESIDENT AND SOCIAL SECURITY

Using the occasion of the dedication of the Jersey City Medical Center, President Franklin D. Roosevelt extended appreciation to the medical profession for its services in the depression. He said:

Let me with great sincerity give the praise which is due to the doctors of the nation for all that they have done during the depression, often at great sacrifice, in maintaining the standards of care for the sick and in devoting themselves without reservation to the high ideals of their profession.

This statement has been prefaced by a recognition of the fact that the Public Works Administration had increased the capacity of American hospitals by some 50,000 beds. Moreover, the President mentioned the desire of the medical and nursing professions to do more to help families of small income in time of sickness. Particularly interesting to physicians, however, were the words of assurance in which the President intimated a desire to still certain apprehensions which have been prominent in medical discussions for many months. He continued:

The medical profession can rest assured that the Federal Administration contemplates no action detrimental to their interests. The action taken in the field of health as shown by the provisions of the splendid social security act recently enacted is clear.

There are four provisions in the social security act which deal with health; and these provisions received the support of outstanding doctors during the hearings before the Congress. The American Medical Association, the American Public Health Association and the State and Territorial Health Officers Conference came out in full support of the public health provisions. The American Child Health Association and the Child Welfare League endorsed the maternal and child health provisions.

This in itself assures that the health plans will be carried out in a manner compatible with our traditional social and political institutions. Let me make that point very clear. All states and territories are now cooperating with the public health service. All states except one are cooperating in maternal and child health service, all states but ten in service to crippled children, and all states but nine in child welfare.

Public support is behind this program. But let me stress, in addition, that the act contains every precaution for insuring the continued support and cooperation of the medical profession.

In the actual administration of the social security act we count on the cooperation in the future, as hitherto, of the whole of the medical profession throughout the country. The overwhelming majority of the doctors of the nation want medicine kept out of politics. On occasions in the past, attempts have been

made to put medicine into politics. Such attempts have always failed and always will fail.

Government, state and national, will call upon the doctors of the nation for their advice in the days to come.

The meaning of these words should be clear to all who read. They would seem to signify that the voice of organized medicine has been heard and appreciated in the executive branch of our government. They conclude with a promise of consultation with expert medical advice as new problems arise in the future. The devotion of the medical profession to the public need in our years of stress surely warrants such confidence.

—Editorial, *Jour. A. M. A.*, Oct. 10, 1936.

ANENT THE QUALITY OF MEDICAL CARE

Professor Henry Sigerist once said that the society it serves influences the type and character of medical care that society receives. Sigerist has since become one of the proponents of socialized medicine. What he said, nevertheless, based as it was on studies of the trends in medical practice during the changing epochs of history, is essentially true.

If the strong individualists who compose our great middle class are passing, as Louis Corey believes, then this country instead of consisting mostly of individual farmers, storekeepers and manufacturers will be composed of a great army of job-holders. The liberal professions of law and medicine, too, having almost no private clientele upon which to draw—because there would be so few independent persons in the society of the allegedly ensuing epoch—will perforce have to conform to the pattern of the society about them, and they also would become part of the great job-holding public. Only in this way can one conceive that the thesis statement of Sigerist can find substantiation.

Naturally it would follow, were Corey's prediction to come true—a prediction with which we do not find ourselves fully in accord—that we would have a less vital, a less virile, and a less potent middle class. Likewise we should have medical men of less calibre and of a poorer type. The job-hunting and job-holding groups are nowhere conceded the equal of those who take life as they find it and carve out for themselves from their environment, and from the circumstances it presents, careers

and achievements and worldly goods to better their living standards.

During the various phases of historical times, if we trace the trend of youth toward occupations, we find that when interesting and adventurous careers were closed to most walks of life except in the church, brilliant youth gravitated to the church. When adventure and army life held a lure under the Napoleonic influence, the brightest and best sought a Marshal's baton in an army career. When, at the end of the nineteenth century, industrial development offered fame and fortune as rewards for initiative and courage to those who essayed those careers, intellectually adventurous youth gravitated to these fields. This period also saw the rapid and astounding developments in medicine, because here too, individualistic endeavor brought adequate rewards, and the medical career was both interesting and attractive. The same brilliant types were attracted to medicine as to the industrial fields of endeavor. In all these activities, men were their own masters. They were much encouraged but not controlled by government agencies. In education the emphasis was on the development of the individual doctor, and none on anything else. Medical schools and colleges could successfully raise their standards of requirements for admission, and of curricula. To these schools came some of the best among our youth, and the institutions of learning could exercise their power of selecting the best of these. From this the public benefited by receiving better grade in medical service.

The country's educators should ponder on the problem that will confront them if the efforts of the protagonists of compulsory health insurance have their way, and such a form of delivering medical care to our people is thoughtlessly adopted.

What type of youth would be attracted to a medical career? After a difficult medical course of four years, and the necessary preparatory one, then the arduous post-graduate internship—to be qualified for what? A job, with a fixed income, with a definite number of assigned patients who, to follow the custom set in England, are not thoroughly examined even if there were time allowed to do it; fixed hours of work, perhaps a paid vacation, and at

the end—a pension. A job-holder's career! A government employee with all that this implies!

Obviously such a system will attract quite a different type of men than was drawn into the present system, men who have won high renown and have given American medicine the high place it holds today.

Will not the emphasis in medical education also have to change? Will it not be necessary to train American medical officials rather than American doctors? We see a similar change in a trend in the field of nursing. Formerly all student nurses were educated alike, now there is a distinct change toward educating nursing administrators. Those who actually handle the sick have less arduous curricula to cover. Since the financial income will be greater among the medical administrators of the system than among those of the rank and file who handle the sick, medical education will soon alter to meet the demand of those who will seek careers, not as physicians to the sick, but as a part of the controlling bureaucracy set over the physicians. The colleges will give two types of education to meet the changed conditions. Reasoned out further, it will become necessary to lower standards (as was done in Russia) to attract sufficient numbers to meet the needs of the so-called lower branches of the medical system. Lower standards, reduced entrance requirements, and a totally different type of individual will be found taking up a medical career. And all this is proposed "for the betterment of mankind!"

We, who are opposed to compulsory health insurance, call to the attention of our educators these thoughts, for we are deeply concerned with the *quality* of medical care our community will receive. For it we desire only the best quality of medical care obtainable, delivered by a man or woman of the highest type.

The medical educators of our country have here a responsibility that they must continue to carry. In the discussions of the pros and cons of compulsory health insurance, obviously it is not an economic problem nor is it wholly a sociological question. It is a problem with which the educators of our youth are also concerned. Medical education must be

planned to the end that we may maintain what we have laboriously won—a lower death rate, and a lower morbidity rate than any country where compulsory health insurance is in force, and a level of preventive medicine not equalled in any of the countries of Europe whose example we are so blithely urged to follow.

—Editorial, *N. Y. S. J. of M.*, Oct. 1, 1936.

SUING DOCTORS

According to Henry Morton Robinson, in *The American Mercury* for July, 1936 (The Newest Medical Racket), six times as many patients sued their doctors in 1935 as in 1921. Recent figures, he adds, indicate that in 1936 approximately one doctor in twenty will be a defendant in a malpractice suit. What is the explanation of this increment in medical litigation? Are doctors becoming less competent? Is the public demanding more proficiency in results? Or is the patient more damage-minded today, at the coercion of unscrupulous legal gentlemen?

The facts would seem to indicate that because of the trend of the times, lawyers are looking more avidly towards the medical field for exploitation. The exposure in recent years of a number of large and widespread automobile injury frame-ups has signified in a startling manner the extremes to which lawyers, patients, and even physicians are willing to go to defraud insurance companies. There is the type of legal mind that delights, for a fee, to distort facts, to stretch the imagination, and even to intimidate the physician. Hence the multitude of medicolegal cases.

Doctors who are dubious as to their position when faced with a suit should bear in mind the decision of the late Chief Justice Taft, in the famous case of *Ewing vs. Goode*, as quoted by Robinson:

“Before the plaintiff can recover, she must show by affirmative evidence—first, that the defendant (surgeon) was unskilled or negligent, and second, that his want of skill caused injury. The facts . . . establish neither the neglect nor the unskillfulness of the treatment, or the casual connection between it and the unfortunate event. *A physician is not a warantor of cures.* If a failure to cure were held to be evidence of neglect on the part of

the physician, few would be courageous enough to practice the healing art, for they would have to assume financial liability for nearly all the ills that flesh is heir to.”

Doctors, of course, are not infallible. Five to ten per cent of the malpractice cases have been decided against them. But with reasonable precautions, with proper care and judgment, and with the exercise of common sense, no doctor need fear an adverse decision in court.

—Editorial, *Med. Record*, Oct. 7, 1936.

LAUGHING AT PAIN

Tennyson speaks of “dull narcotics dulling pain.” Physicians are well aware of this technic. But wise is the patient who can laugh at pain. He need not be a stoic, but some such philosophy as enabling him to accept affliction, not as a special curse directed towards him personally, but as an inevitable process of nature, will surely tend to mitigate his sufferings. The modern humorists are no weaklings. When the ravages of illness strike them down, they do not shed tears, but they proceed to make capital of their diseases. Many a medical and hospital bill is paid for by a sense of humor.

Mark Twain laughed off many of his afflictions. O. Henry cured his spiritual ache in a masterpiece called: *Let Me Feel Your Pulse*. Irvin Cobb set the pace for the magazine writers with his classic *Speaking of Operations*. The late Will Rogers recounted his hospital adventures in a gem of humor, *Ether and Me*, part of which, it seems, appeared as an essay on his laparotomy for gallstones, called aptly enough *A Hole in One*. Lately, the renowned Arthur “Bugs” Baer has discoursed on his medical misadventures in attempting to find relief for his gallstones (*Saturday Evening Post*, July 18, 1936:—And French-Fried Potatoes).

According to his own diagnosis, he was a victim of “newspaper stomach,” a rather new nosological term, which implies a gastric result of trying to eat and think at the same time. He became an expert, horizontally speaking, on clinics, symptoms, operating tables, x-rays, fluoroscopes, and bismuth. Bismuth, he says, is the stuff you drink just before your insides light up like an electric sign

at twilight; if it ever hardens inside you they set you out in the park for a memorial statue.

You aren't sick when you call a doctor, or when he calls in another. But you know you're pretty sick when they start a duet of moose-calls and you hear the surgeons charging in the underbrush. When six arrive, that constitutes a quorum, and they elect officers. He continues with further opinions on consultations, the proper technic of whispering in front of a patient, the bedside manner of visiting a patient in the hospital, and other things that would only occur to a humorist. Of course he tells of his operations; who doesn't? He discovered that by going to bed for ten or twelve days he could recover as gradually as depositors in a closed bank. He visits his old family doctor whose office hours were from pain in the morning to groan at night. He encounters the electrocardiogram; you remove your right shoe and stocking and put your left foot in a bucket of water. Your right and left hands are placed in tubs of cold chowder, and you are then wired for sound. Your heart action is indicated by a jerky line wandering all over the map, like a goat on a hill. The log of his quest for health indicated that he left nothing untried. And of course his cure was as simple as eliminating ham and eggs and French-fried potatoes. But most important in his therapy was his ability to laugh it all off.

—Editorial, *Med. Record*, Oct. 7, 1936.

MISCELLANEOUS

The American Board of Internal Medicine

The American Board of Internal Medicine, incorporated February 28, 1936, completed its organization on June 15, 1936. The officers chosen were Walter L. Bierring, M. D., Des Moines, chairman; Jonathan C. Meakins, M. D., Montreal, vice-chairman; and O. H. Perry Pepper, M. D., Philadelphia, secretary-treasurer. These officers with the following six members constitute the present membership of the board; David P. Barr, M. D., St. Louis; Reginald Fitz, M. D., Boston; Ernest E. Irons, M. D., Chicago; William S. Middleton, M. D., Madison; John H. Musser, M. D., New Orleans, and G. Gill Richards, M. D., Salt Lake City.

The term of office of each member will be

three years, and no member can serve more than two consecutive three-year terms.

The organization of the Board is the result of effective effort on the part of the American College of Physicians in conjunction with the Section on Practice of Medicine of the American Medical Association and these two organizations are represented in the membership of the Board on a five to four ratio respectively.

The American Board of Internal Medicine had previously received the official approval of the two bodies fostering its organization, as well as that of the Advisory Board for Medical Specialties and the Council on Medical Education and Hospitals of the American Medical Association.

The purpose of the Board will be the certification of specialists in the field of internal medicine, and the establishment of qualifications with the required examination procedure for such certification.

While the Board is at present chiefly concerned with the qualification and procedure for certification in the general field of internal medicine, it is intended to inaugurate immediately after July 1, 1937 similar qualification and procedure for additional certification in certain of the more restricted and specialized branches of internal medicine, as gastroenterology, cardiology, metabolic diseases, tuberculosis, allergic diseases, etc. Such special certification will be considered only for candidates who have passed at least the written examination required for certification in general internal medicine. The operation of such a plan will require the active participation and cooperation of recognized representatives from each of such special fields of medicine.

Each applicant for admission to the examination in internal medicine will be required to meet the following standards:

General Qualifications

1. Satisfactory moral and ethical standing in the profession.

2. Membership in the American Medical Association or, by courtesy, membership in such Canadian or other medical societies as are recognized for this purpose by the Council on Medical Education and Hospitals of the

American Medical Association. Except as here provided, membership in other societies will not be required.

Professional Standing

1. Graduation from a medical school of the United States or Canada recognized by the Council on Medical Education and Hospitals of the American Medical Association.

2. Completion of an internship of not less than one year in a hospital approved by the same council.

3. In the case of an applicant whose training has been received outside of the United States and Canada, his credentials must be satisfactory to the Advisory Board for Medical Specialties and the Council on Medical Education and Hospitals of the American Medical Association.

Special Training

1. Five years must elapse after completion of a year's internship in a hospital approved for interne training before the candidate is eligible for examination.

2. Three years of this period must be devoted to special training in internal medicine. This requirement should include a period of at least several months of graduate work under proper supervision in anatomy, physiology, biochemistry, pathology, bacteriology, or pharmacology, particularly as related to the practice of internal medicine.

3. A period of not less than two years of special practice in the field of internal medicine or in its more restricted and specialized branches.

A sound knowledge of physiology, biochemistry, pharmacology, anatomy, bacteriology, and pathology, in so far as they apply to disease is regarded as essential for continued progress of the individual who practices internal medicine. The mere factual knowledge of medicine and its basic sciences is not sufficient. The candidate must have had training in their use in furthering his understanding of clinical medicine. This implies practical experience under the guidance of older men who bring to their clinical problems ripe knowledge and critical judgment. Preparation to meet this requirement adequately may be even more difficult to obtain than the so-

called scientific training. It may, however, be acquired in the following ways:

(a) By work in a well-organized hospital outdoor clinic conducted by competent physicians.

(b) By a prolonged period of resident hospital appointments likewise directed by skilled physicians.

(c) By a period of training in intimate association with a well-trained and critical physician who has taken the trouble to teach and guide his assistant rather than to require him only to carry out the minor drudgery of a busy practice.

4. The Board does not consider it to the best interests of internal medicine in this country that rigid rules as to where or how the training outlined above is to be obtained. The responsibility of acquiring the knowledge as best he may rests with the candidate, while the responsibility of maintaining the standard of knowledge required for certification devolves on the Board.

Method of Examination

The examination required of candidates for certification as specialists in internal medicine will comprise, Part I (written) and Part II (practical or clinical).

Part I—The written examination is to be held simultaneously in different sections of the United States and Canada and will include:

(a) Questions in applied physiology, physiological chemistry, pathology, pharmacology, and the cultural aspects of medicine.

(b) Questions in general internal medicine.

The first written examination will be held in December 1936, and candidates successful in this written test will be eligible for the first practical or clinical examination which will be conducted by members of the Board near the time for the annual session of the American College of Physicians at St. Louis in April 1937. The second practical examination will be held at Philadelphia near the time of the annual session of the American Medical Association in Atlantic City in June 1937.

The fee for examination is forty dollars which must accompany the application and

an additional fee of ten dollars is required when the certificate is issued.

Application blanks and further information can be obtained by addressing the office of the chairman, Walter L. Bierring, M. D., 406 Sixth Avenue, Des Moines, Iowa.

American Board of Obstetrics and Gynecology

The next written examinations and review of case histories of Group B applicants by the American Board of Obstetrics and Gynecology will be held in the various cities in the United States and Canada on Saturday, November 7, 1936, and on Saturday, March 6, 1937.

The next general examination for all candidates (Groups A and B) will be held in Atlantic City, N. J., on June 8 and 9, 1937.

Application blanks and booklets of information may be obtained from Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh, Pennsylvania. Applications for these examinations must be filed in the Secretary's office not later than sixty days prior to the scheduled date of examination.

Traumatic Neuroses

There is little or no therapeutic benefit in cash settlements paid to injured workmen who have traumatic neuroses, according to an investigation made recently by Carl Norcross, Ph. D., of the Rehabilitation Division of the New York State Department of Education. Results of the investigation have been published under the title "Vocational Rehabilitation and Workmen's Compensation" and the report is a follow-up study of 322 workmen's compensation cases throughout New York which were closed by a lump-sum settlement of \$1000 or more.

It has been generally accepted in both medical and workmen's compensation circles throughout the country, says the report, that a cash award would help to cure a neurosis. "A careful investigation made a year or more after the settlements has convinced us that the value of a cash award is vastly overrated," writes the author. "It is the settlement of the case, the actual ending of the litigation, which is of value. Whether the final compensation award is paid in one lump or

extended through a number of installments makes little difference to the claimant's condition."

The investigation disclosed that 16 per cent of the men had lost a large share of their compensation through unwise expenditures. The men who had no losses were found to have dissipated their funds much more rapidly than they would have under an installment system. Both because there was found to be a wastage of compensation funds, and because there appeared to be no therapy in the settlements, the author has recommended that lump-sum settlements be discontinued.

Dr. Norcross makes a number of recommendations for improving the handling of neurotic cases in the workmen's compensation rooms. He urges that cases be given a more prompt and careful handling. The average neurotic case is open in the workmen's compensation division for nearly three and one-half years, it is said, and much of the delay is unnecessary.

The author states that neurotic conditions grow as cases are delayed. He also points out the dangerous policy of permitting claimants to read their own medical reports, or to be present when physicians are testifying, especially in contested cases where there is a difference of opinion.

In New York a compensation case theoretically may always be reopened. The report suggests that it is a poor policy to let neurotic claimants know that when their money is spent that they may try to reopen their cases. The author believes that one of the evils of the existing New York system in non-schedule cases is that claimants must be willing to accept a lump-sum settlement. After a fair offer is made, the neurotic claimant may procrastinate indefinitely by refusing such a settlement. Thus the case is delayed, and the patient's mental condition may become worse. The remedy suggested by the report is that the referee, acting on competent medical advice, fix a fair settlement and close the case, with the award being paid in bi-weekly installments.

To overcome any prejudice the claimant may have toward the insurance company, it is suggested that the money be paid to a state administered trust fund, which already exists

in New York. The carrier could close the case on its books, and the claimant could be told his case is definitely closed but that he would get all his money, regardless of his state of health. The patient would not have to remain sick to get his award.

Provision is made for permitting the claimant to get an advance on his compensation for any necessary purpose, including rehabilitating himself on a farm or in a small business.

Copies of the report may be secured through the publisher, The Rehabilitation Clinic, 28 East 21st Street, New York City. Price one dollar.

Army Medical Library

Resolution Recommending the Appropriation of Adequate Funds for the Maintenance and Growth of the Army Medical Library's Book Collection and Index-catalogue.

The Medical Library Association, comprising two hundred of the medical libraries of the United States and Canada, assembled in its thirty-eighth annual session in St. Paul, June 22, 1936, notes with pleasure and pride the appearance of volume one of the Fourth Series of the *Index-catalogue* of the Library of the Surgeon-General's Office, United States Army (Army Medical Library). The Association records with satisfaction the abbreviations and changes in composition in this new volume effecting a saving of twenty per cent in space with accompanying reduction in costs.

After a delay of three years during which no volumes of this *Catalogue* were printed, the appearance of this first volume of the Fourth Series gives renewed assurance of the continuation of this publication, which, together with the Army Medical Library, is considered the outstanding contribution which our country and its Government have made to medical knowledge, and

WHEREAS, The value and usefulness of the *Index-catalogue* is dependent upon the completeness of the files of medical publications contained in the Library of the Surgeon-General's Office—a public, national, medical library, the greatest in the world, serving in its present form of administration with satis-

faction the medical profession and the medical libraries of our country, and

WHEREAS, In recent years the annual appropriation of the Congress has been wholly inadequate to provide sufficient funds to acquire the current medical books and periodicals issued throughout the world, so that they might be available for use throughout the country and for inclusion in the *Index-catalogue*.

THEREFORE BE IT RESOLVED, That the Medical Library Association urges the Congress to appropriate annually to the Library of the Surgeon-General's Office an adequate sum for current medical books and periodicals and for the purchase of back publications lost during those recent years when the amount granted was grossly inadequate, thus depreciating the completeness and usefulness of the Library's collection; and an additional sufficient sum annually, for as many years as may be required, in order to make for the greatest possible completeness of the collection and its *Catalogue*; and

BE IT FURTHER RESOLVED, That a sum be appropriated annually to defray the cost of printing regularly each year not less than one volume of the *Index-catalogue*, and

BE IT FURTHER RESOLVED, That a copy of these resolutions be spread upon the minutes of the annual meeting of this Association and sent to the President of the United States, the presiding officer of both houses of Congress, the Secretary of War, the Surgeon-General of the Army, and to the national, state, and other medical periodicals with a request for publication, and to the members of this Association, urging the organization of which they are a part and all other medical associations and institutions to adopt similar resolutions to be sent to their local members of Congress requesting their support of these measures.

A Sanguinary Conflict

"Read Your Own Blood Pressure, 10c," was the large sign in front of a device at Coney Island, which has become the storm center of a legal battle. The State Department of Education has asked the Supreme Court to order this and other machines of the kind out of existence on the ground that their operation violates the State Medical Practice

Act. Taking a blood pressure is argued to be a diagnosis of a physical condition, and should not be done except by a physician. The maker of the machines has countered by filing an injunction to prevent interference with his business, and the matter will be fought out in the courts.

On August 12 an operator of one of the machines was arrested on a charge of practicing medicine without a license, and will soon be brought to trial. Any comment here on his guilt or innocence of this offense before the verdict would be in contempt of court, and the next issue of this department might have to be written in the calaboose, so nothing had better be said, perhaps, on that point.

It would be easy to magnify the danger of this blood-pressure device out of all true proportion. Probably nobody with arteriosclerosis is going to burst a blood-vessel when he sees the pointer climb to some high figure on the dial. At the same time we all know that such a casual sidewalk reading is more likely to be wrong than right. The poor dupe who pays his dime may easily be so fidgety that he will show a higher pressure than he normally has. Every doctor knows the excitable type of patient who has to be calmed down and put at his ease before taking the reading, or it will be too high. A leading Boston internist is quoted as saying that he takes three rapid readings in succession in all cases and accepts the lowest systolic and diastolic as the fairest.

The Coney Island device came up in a conversation at the New York Academy of Medicine a few days ago and a well-known physician said it reminded him of an experience related by Heywood Broun, the columnist. It seems that Broun was having a physical examination, and noticed a slight lift of the doctor's eyebrow as he took his blood-pressure. "What's wrong, doctor?" "Oh, nothing." "Why did you lift your eyebrow?" "Well, your blood-pressure is just a little low, but not enough to bother about."

Nevertheless, it did worry him, and a few days later he decided to have another doctor go over him. Again, as he was taking the blood-pressure, the physician's eyebrow arched a trifle. "What's wrong, doctor?" "Oh, nothing." "Why did you lift your eye-

brow?" "Well, your blood-pressure is just a little high, but not enough to bother about." The worry had done it. The fact is, of course, that the arterial tension is so fickle an affair that a device like the one at Coney is worse than useless. To take a test after chuting the chutes, bumping the bumps, riding the merry-go-round, and filing up with hot-dogs and peanuts is like counting the pulse after a foot-race. But to get all steamed up over the imaginary perils of the machine is equally too feverish. If some folks are scared into consulting a doctor, they may get a real examination and advice that will do them good. Too drastic action may be like firing a cannon at a flea.

To the above comments, taken from the *New York State Journal of Medicine* for September, 1936, one of the most reliable of the manufacturers of sphygmomanometers adds:

We are vigorously opposed to this misuse of medico-scientific instruments, having gone on record with the American Medical Association to this effect a year ago. Moreover, we have refused to fill large orders for Baumanometers to be used for such purposes.

This evil practice should be stopped and we would appreciate your cooperation in reporting to us any instance that comes to your attention—especially where some definite harm has resulted to a patient.

Osteomyelitis of Frontal Bone: Notes on Three Cases

H. P. Mosher, Boston (*Journal A. M. A.*, Sept. 19, 1936), reports three cases, two of which had a fatal outcome. He says that he is convinced even more strongly than he was in his report of three years ago that the edema of the skin of the forehead is a rough guide to the extent of the bone and periosteal infection. If there is actual bone necrosis the bone is infected without necrosis for an inch to an inch and a half beyond the necrotic area. Bone necrosis does not occur until seven to ten days after the pitting edema appears, and the x-ray is not positive until necrosis appears. Examination of the bone specimen removed in two of the cases just reported showed that the infection spreads along the inner surface of the bone, as well as by the diploic veins. When the infection spreads by way of a diploic vein it may localize at a point far from the original

source of infection. When it does so localize, the pus tends to work both inward and outward, giving either a subperiosteal abscess or an extradural abscess, or both, with a destruction of the bone between the two. When a case has lasted two or three weeks, the operator should expect to find one or both of these conditions. The histologic examination of the author's specimens shows in addition that the infection may spread by way of an inner layer of new bone which is formed between the skull and the dura. The small veins which run in the new bone are often infected and there are numerous hemorrhagic clots which also are infected. Further, the infection spreads by way of the fibrous tissue which covers the new bone and which binds the inner surface of the skull to the dura. The operator who is doing his first operation on osteomyelitis of the skull should expect extradural abscesses as a matter of course. In fact, he should expect more than this; he should be on the lookout for a subdural abscess or a brain abscess. The brain abscess, if present, is usually found later or comes later as a complication, but it is always round the corner, and should be watched for even at the first operation. The more he sees of osteomyelitis of the frontal bone, the more he feels that the whole face of the frontal bone should be removed as a routine from the hairline to the eyebrow. Preferably, it should be removed in one piece. However, if the patient is in poor condition and there is an area of necrosis, it is justifiable to work from the necrotic area outward, removing the bone for an inch to an inch and a half in all directions from the necrotic area. He believes further that both frontal sinuses should be opened, and the anterior and posterior walls of each sinus removed. He feels strongly that the lateral limit of the bone flap on each side should be at least the outer angle of each frontal sinus or, better, the outer angular process of the frontal bone on each side. The objection to this extensive removal is the deformity. It has been proved that fully 90 per cent of this can be corrected by modern plastic surgery. Therefore the surgeon should not allow his hand to be halted by the question of deformity. If he does he will lose most of his cases of osteomyelitis of the skull.

October, 1936.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC.,

REQUIRED BY THE ACT OF CONGRESS OF AUG. 24, 1912
Of the Delaware State Medical Journal, Published Monthly
at Wilmington, Delaware, for October 1st, 1936

STATE OF DELAWARE } ss.
COUNTY OF NEW CASTLE }

Before me, a Notary Public in and for the State and County aforesaid, personally appeared M. A. Tarumianz, M. D., who having been duly sworn according to law, deposes and says that he is the Business Manager and Associate Editor of the Delaware State Medical Journal, and that the following is, to the best of his knowledge and belief a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Name of—	Post Office Address—
Publisher, Medical Society of Delaware, Wilmington, Del.	

Editor, W. Edwin Bird, M. D., Du Pont Bldg., Wilmington, Del.

Associate Managing Editors, M. A. Tarumianz, M. D., Farnhurst, Del., and Dr. W. H. Speer, 917 Washington St., Wilmington, Del.

Business Manager, M. A. Tarumianz, M. D., Farnhurst, Del.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)

The Medical Society of Delaware.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

M. A. TARUMIANZ, M. D.

Sworn to and subscribed before me this 1st day of October, 1936.

(Seal)

WILLIAM BLACK,
Notary Public.

(My Commission expires July 26, 1938)

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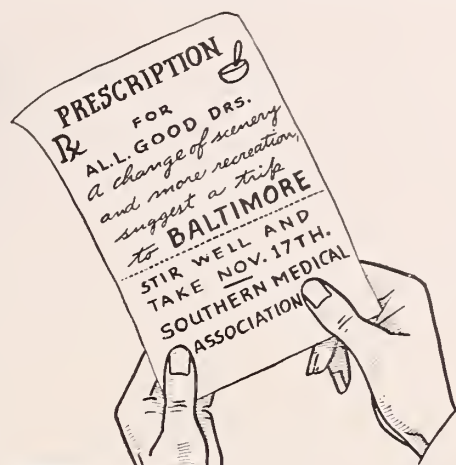
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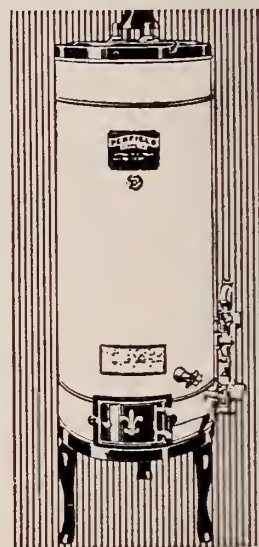
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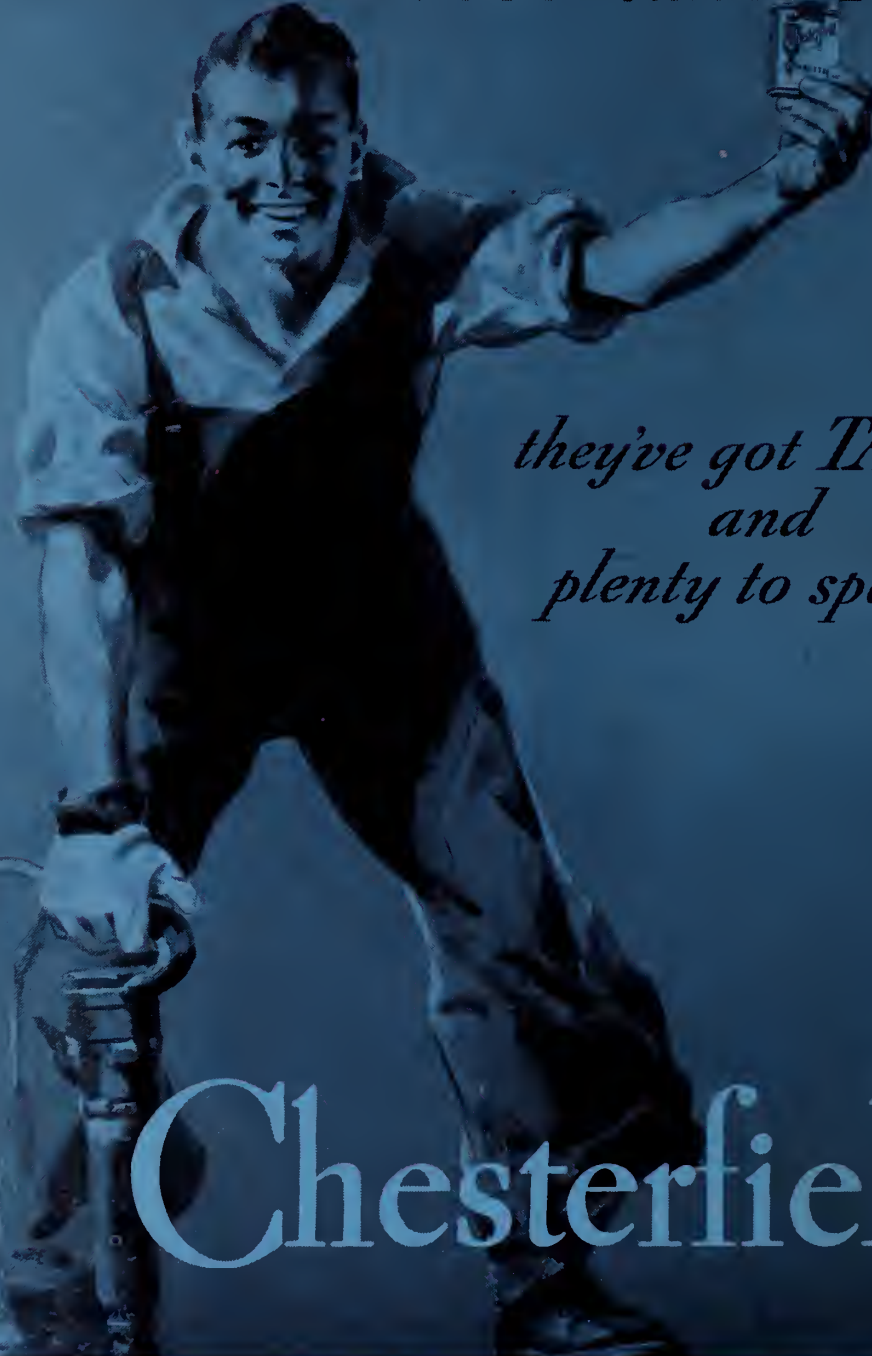
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DELAWARE STATE MEDICAL JOURNAL

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V. VITAMIN G

● By 1926, it was apparent that the anti-neuritic vitamin B of earlier investigators was in reality a combination of several vitamins. In that year, Goldberger postulated the existence of a second vitamin associated with the so-called vitamin B "complex" which he designated as the P-P or pellagra-preventive factor. Evidence has been offered that this factor—subsequently named vitamin G—exerts a specific action in the cure and prevention of human pellagra and a similar condition in experimental animals (1).

Since Goldberger's pronouncement, considerable research has been devoted to resolution of the vitamin B complex and, what is equally important, to testing the specificity of vitamin G in the cure of human pellagra (2).

The findings in the laboratory and clinic have not, in some respects, been entirely in accord (3).

As reports of further investigations appeared in the literature, it became clear that the vitamin B complex had been aptly named. At one time claims were made for the existence of as many as eight factors in this complex (4).

While later work has reduced this number, we know today that what has been consid-

ered in the past as vitamin G is, in reality, a combination of several factors. A relation between experimental cataract and vitamin G has been described and, recently, another associated factor was postulated (5).

The significance of these individual factors in human nutrition has not as yet been established. However, regardless of this fact, students of nutrition are agreed that we must provide for the inclusion of so-called vitamin G—admittedly a complex—in the daily dietary. It is also obvious that until more is known about the individual components of the complex, we must continue to depend upon present day bioassay methods to determine the "vitamin G" potencies of foods.

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(1) 1926. U.S. Pub. Health Report, 41, 297.

(2) 1934. Am. J. Med. Sci., 187, 512.

1935. J. Am. Med. Assoc., 104, 1377.

(3) 1932. J. Am. Med. Assoc., 99, 120.

(4) 1933. J. Nutrition, 6, 559.

(5) 1934. J. Nutrition, 7, 97.

1936. Science, 83, 17.

(6) 1932. J. Nutrition, 5, 307.

1932. Ind. Eng. Chem., 24, 457.

(7) 1932. J. Am. Med. Assoc., 99, 95.

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N. Y. State Jour. Med., June 1935, Vol. 35, No. 11
Arch. Otolaryngology, Mar. 1936, Vol. 23, No. 3, 306-309

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	Emphysema
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CAUSES OF ALKALOSIS	
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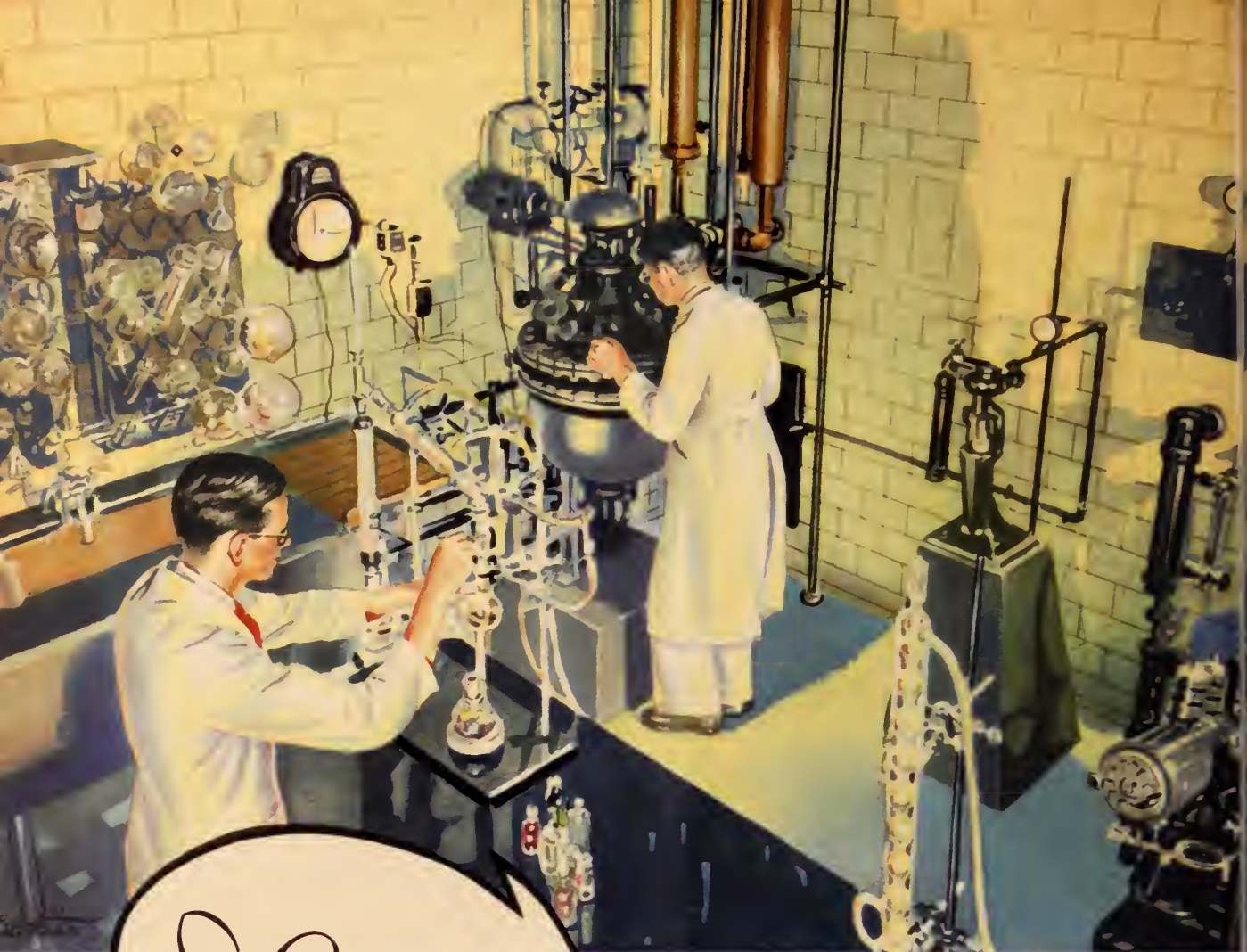


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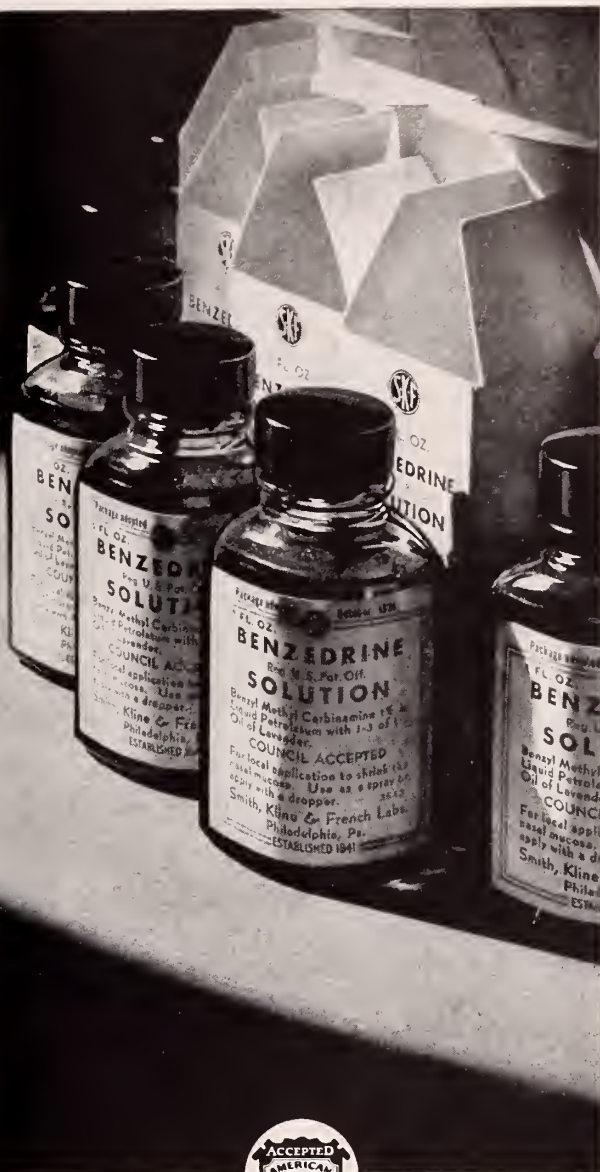
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THE BARBER SURGEONS AMONG THE EARLY DUTCH AND SWEDES ALONG THE DELAWARE*

SAMUEL X. RADBILL, M. D.

Philadelphia

The first medical figures to arrive in this section of the country with the Swedish and Dutch settlers were barber surgeons, or "balbieren," as they were termed in the Germanic tongues of that time. These masters not only shaved, but performed the commoner, everyday medical and surgical procedures, developing a degree of practical efficiency that in many instances outclassed the academic physicians of their times. It is only necessary to recall that Ambrose Pare, who became the father of modern surgery, had been originally a barber's apprentice, to be assured of the propriety with which the barber surgeons were generally employed by the people at large. They corresponded to the general practitioner of the present day, prepared themselves in the arts of medical practice by diligent study and prolonged apprenticeship, restricted from their guilds those inadequately prepared for the practice of their profession, and provided the public masses with medical care not any worse than that which the more lordly classes received from the more pretentious faculty. Figure 1, with its appended poem** which I have rather loosely translated, gives a fair idea of the 16th century barber and his diversified duties. When any group of colonists was prepared for emigration, sick-

ness on the voyage and after was to be expected, so the Dutch and Swedish West India Companies always hired doctors to accompany the various expeditions to America. Some remained in the new world with the settlers and others returned with the returning ships. The preserved records give us only meagre details about these, but from the slight amount of information thus gleaned, an inkling of the type of medical care offered can be apprehended.

In 1608 Champlain laid the foundation of the French claims to Canada and about the same time the Dutch planted New York and the British founded Virginia. About this time, too, the Englishman, Henry Hudson, in the service of the Dutch East India Company, explored the Atlantic seaboard, discovered the Delaware Bay, and soon after, the Hudson River, and instigated the establishment of New Amsterdam at the mouth of the Hudson somewhere around the year 1621. From this primary focus Holland began to progress southward over the lands bordering both sides of the Delaware, which they called the South River in contra-distinction to the North River; viz., the Hudson. In 1623, to protect their settlers they built their first fort on the Delaware, Fort Nassau. Here, at the present site of Gloucester, in New Jersey, probably sprang up a village.

Late in the fall of 1637, Peter Minuet, a Dutchman in command of two ships, the Kalmar Nyckel and The Fogel Grip, left Gottenburg, Sweden, under the patronage of the Swedish West India Company and arrived at the South River the following spring, buying land along the west side of the Delaware from an Indian chief for the round sum of one copper kettle. This was March 29, 1638. Fort Christina, the future city of Wilmington, was built and the colony named New Sweden. Thus

* Reprinted, by special permission, from the *Bulletin of the Institute of the History of Medicine*, November, 1936. The seven figures are omitted.

**I am called on many a behalf
Can make many a curative salve;
Can heal fresh wounds with right good grace,
And old hurts too, as well as bone breaks;
Heal the French pox and needle a cataract.
Quench Anthony's Fire and teeth extract;
Likewise shave, massage and trim,
And open veins at anybody's whim.

From: *Der Arzt und die Heilkunst in der deutschen Vergangenheit*, Herman Peters, Leipzig, 1900, p. 78.

were established the opposing settlements of the Dutch and the Swedes along the Delaware.

For the first Swedish expedition two barber surgeons were hired at Amsterdam. (1) The first page of the Journal of the New Sweden Co., giving items of expenses connected with the first expedition records that 10 Riksdaler (about \$12.00) was paid to Dr. Hanns and 8.40 Rd. went for medicaments. The doctor mentioned was a barber-surgeon, Hans Janeke, who, arriving March 29, 1638, was apparently the first surgeon along the Delaware. How long he remained here this trip I am unable to discover but we shall find him making at least two more voyages to New Sweden as our story develops.

The first year, the colony at Fort Christina seems to have been quite prosperous, but the year following the country was depressed by disease, attributed to severe climatic conditions. No doubt the colony's first clergyman, Reorus Torkillus, was called upon to exert the medical skill in which most of the ministry of that period were comparatively well trained, for we do not know whether the company's barber surgeon remained with the colony long enough to be of service during this trying time. The Swedes could have called to their aid, however, the barber surgeon Jan Pieter-son, who was at this time stationed up the river at Fort Nassau.

This gentleman had received the appointment as Surgeon to the Dutch colony at the South River June 3, 1638. His term of service began July 10, 1638 at the stipulated salary of ten florins (\$4.00) per month, and lasted two years until his death. (2) Through the kindness of Mr. A. J. F. Van Laer, Archivist at the State Department of Education, Albany, N. Y., I am enabled to present the following copy, with slight changes, of E. B. O'Callaghan's manuscript translation of the will of Jan Pieter-son Van Essendelft, formerly recorded in Vol. 1, p. 199, of the New York Colonial Manuscripts, which volume was destroyed in the Capitol fire of March 29, 1911.

WILL OF JAN PIETERSON VAN ESSENDELFT

In the name of the Lord, Amen. Before me, Cornelis van Tienhoven, secretary in the New Netherland appointed by the Chartered West India Company, appeared Jan Pieter-son Van Essendelft,¹ at his house in Fort Amsterdam, lying sick in bed, yet in full possession of his memory, understanding and speech, who, reflect-

ing and meditating on the shortness of human life and that nothing is more certain than death and nothing more uncertain than the hour thereof, commends his soul into the hands of Almighty God, who has created and formed heaven and earth and all that has life out of nothing, and his body to a Christian burial. Furthermore, being desirous to anticipate the uncertainty of death by certain testamentary disposition and while living to dispose by last will of his sailor's clothes and of his earned monthly wages due him by the honorable West India Company, he, the testator, accordingly gives and bequeaths to Gerrit Bartelsen, who attended him in his sickness, the sum of twenty guilders, his chest with two coverlets, one pillow and one otter; to Claes Groen one sheet; to Martin Harmanse, mason, two pairs of stockings, one blue undershirt and one blue pea-jacket; and to Kersten Jansen two woolen and one pair of linen breeches. After his (the testator's) death, Master Hans Kierstede shall take possession of all the surgical instruments belonging to him, the testator, and have the right to dispose thereof as his own property, forever. He, the testator, also gives and bequeaths to his brother Adriaen Pieter-son and his sister Anna Pieter-son all such monthly wages as the honorable company shall owe him after his death. All of which he, the testator aforesaid declares to be his last will and testament, desiring that the above-named persons shall possess the goods left to each of them as a legacy as their own property and praying and requesting that these presents may have effect and be valid before all courts, judges and justices. Done this 10th of April Anno 1640, in Fort Amsterdam in New Netherland. This is signed by the testator and the subscribing witnesses.

Jan Pieter-son.

Ulrich Lipoltt, witness
David Provoost, *idem*

It is interesting to note the fraternal spirit of friendship in the legacy to Master Hans Kierstede. Kierstede was a barber surgeon who had arrived at Manhattan early in 1638, married the daughter of a famous New Amsterdam midwife and successfully practiced in that colony for some thirty years. Jan Pieter-son's chief claim to fame rests in his being accorded the honor of first surgeon along the Delaware by the local historians up to this time. However, in view of the Swedish records, unearthed at Stockholm, it appears that Hans Janeke as barber surgeon of the first expedition, preceded him by at least three months.

It is hard to decide what disease so harassed these early settlers. Noah Webster stated that between the years 1632 and 1637 Europe and America were severely annoyed by pes-

¹Probably intended for Assendelft, the name of a village in the province of North Holland and also a village in the province of North Brabant. Van Assendelft is a well-known name in the Netherlands, so that it is uncertain whether "van Essendelft" was the surgeon's family name, or indicates that he came from one of the two villages mentioned above.

tilential diseases and quotes Winthrop as relating that 1800 people died in Virginia during the year 1635. (3) The yellow fever, of course, was endemic all along the coast of North America, long before the coming of the white man, and is known to have raged among the Indians of New England so early as 1618. Malaria, certainly along the low marshy regions close to the river, ran rampant at the proper season of the year and we frequently read of the inhabitants complaining of the agues. Indeed, this was the disease that Dr. James J. Levick (4) accused of breaking up an entire English Settlement in 1641 near the present site of Salem, New Jersey. Pestiferous mosquitoes made untenable the Swedish fort at Helsingborg on the Delaware. The spot was nicknamed Myggenborg, or Mosquito Fort.

Even before the first emigrants arrived, the native Indians, among other benefits of civilization, had been gifted by the early Spaniards with the small pox, a disease which played havoc among the susceptible redskins. Captain Dermer, an English adventurer sailing along the middle Atlantic Coast during the spring of 1619 on his way from the North to Virginia, found many Indian towns totally depopulated, while in others but few natives remained alive; but "not free of sickness," he says. "Their disease, the plague, for we might perceive the sores of some that had escaped" (I presume he referred to the pock marks), "who described the spots of such as usually die." (5)

The winter of 1642 was very severe and the summer following very unhealthy on the Delaware River. Winthrop, in his famous journal, noted that both Dutch and Swedes were greatly afflicted and that the mortality among the settlers from New Haven who had not long been in the country was so great, it broke up the settlement. Governor Printz of New Sweden thought so many people died in 1643 because they had such hard work and little to eat. "Afterwards," he wrote, "since board had been given them, besides wages, they have been doing well." (6) According to the Dutch account at this time the number of men was reduced to 80 or 90 all told.

In the budget drawn up the 30th of August, 1642, by Johann Printz, the newly commis-

sioned Governor of New Sweden, among the 183 inhabitants there resident, a surgeon was included in the list, together with a preacher, a clerk and a hangman. (7) This Esculapian must have been the barber, Mr. Timon Stidden.² He came over on one of the first five Swedish expeditions which arrived during the years between 1637 and 1642, and returned on the ship *Fama* in 1644. Upon his arrival in Stockholm, he was paid by Trotzig, agent of the New Sweden Company, 468.19 Riksdaler, a considerable sum which must have taken four or five years service in the Company to accumulate. From this I judge that Stidden may have dwelt upon the shores of the Delaware during this, his first stay, for at least the four or five years preceding 1644.

When the sixth Sweden expedition was being organized, the barber, Hans Janeke, from Koenigsbergh, was hired to go to the colony and was on the payroll of the crown in 1643-44 as barber surgeon at 180 dalers. 60 dalers was given for the preparations of his medicine chests. Johan Papegoja, the barber surgeon Hans Janeke, a number of soldiers and a few colonists arrived with this expedition.

Arriving in New Sweden in the service of the crown on March 31, Janeke (or Janneke as his name was sometimes spelled) replaced Timon Stidden, who was doubtless glad of an opportunity to revisit his native land. Janeke apparently remained with the colony until Stidden's return ten years later, for the records in Sweden mention that Janeke returned in 1654. During his service at South River, he dwelt at Fort Christina, but the practice of medicine as well as surgery, in all likelihood called him to many points at a distance from this primitive trading post.

October 1, 1646, the vessel "Gyllene Haj" (Golden Shark) arrived bringing the seventh expedition. The master of the ship, the mate and all the people, except one man, were sick. Likely enough, among other ailments, they were suffering from scurvy. They did not recover until the following December, after which the people were all reported to be in good health, a mortality of but two men and two small children being included in the governor's report of the following year. (9)

² Various spelled; as, for example: Stiddem, Steddin, Stidhem, Stedham, etc.

In 1648 came the eighth expedition on the ship "Swan." A barber-surgeon, Mr. Friedrich Hans Kock, was engaged to go to New Sweden on this expedition and his medicine cases were fitted out and medicine was bought on Hans Janeke's memorial, to the value of 83 Riksdaler. Kock did not remain in New Sweden, but returned with the ship in 1648.

The ship "Katt" was fitted out in 1649 for the ninth expedition. Among the more prominent colonists secured for this unfortunate party was the barber-surgeon, Timon Stidden. The boat on which he sailed was shipwrecked and the passengers were dispersed among the ill-disposed Spaniards, and later the French, by whom they were miserably treated and only very few survived to eventually reach Sweden again. After about two years Timon Stidden managed to get to Amsterdam with his wife and children. He arrived in most miserable circumstances and was aided by Trotzig, the factor of the New Sweden Company in Holland at the time. From Holland, Stidden was brought to Sweden by a ship captain.

Apparently undaunted by these harrowing experiences, when preparations were begun in 1653 for the next expedition Timon Stidden was on hand to be included on the company list as barber-surgeon. A ship called the "Oern" (Eagle) was finally fitted out with 350 persons aboard, and on January 7, 1654, after many mishaps at the start, left for New Sweden. During the voyage dysentery and ague laid waste the passengers, killing many. By the 10th of April no fewer than 250 people were sick. They ultimately cast anchor at Fort Casimir (now New Castle, Del.) on May 21, 1654.

Heelmeester Stidden landed with this expedition. After having wrested with the many maladies which assailed the passengers throughout the voyage, he arrived only to find the few settlers still remaining here in a miserable plight. Not only had many persons returned to Sweden with Governor Printz the preceding year, but many had gone off to Virginia and others had died, so that only about 70 inhabitants were left. Among the latter was probably Hans Janeke, for, in reporting home to Oxenstiern two months later, Director Rising wrote, "the barber surgeons

were busy caring for those in greatest need, while superintending the treatment of others," thus indicating the presence of other healers besides the newly arrived Timon Stidden. Janeke, however, soon after conditions were improved, left his colleague in full charge and returned to Sweden, his name being mentioned in the Journal of the Company as returning in 1654.

It was at this time that an epidemic (probably small pox) broke out among the Indians which the natives attributed to the new arrivals. Although the Indians were well satisfied with the Swedes, they remarked that they had received sickness from the ship through which they feared that all their people would perish. Fire had been seen around the vessel at night and the savages believed that an evil spirit had come on the ship. A chief asked for a boat for two medicine men who should go down to take the spirit away but it seems no boat was available.

Timon Stidden who continued as the barber-surgeon in the colony from this time on, appears to have been educated in the arts and sciences of medicine and surgery in Europe. He is said to have come from Hammel which Amandus Johnson believes is the town of Hammal, North of Sundsvall, Sweden. His mother lived in Stockholm in 1641. During his first stay in the colony of New Sweden (which lasted until 1644) he brought a report to the Swedish Governor that an Englishman named Lamberton, then trading in the Delaware with the Indians, was conspiring with the natives to murder the Dutch and Swedes and destroy their settlements. Having some knowledge of the Indian language, he was sent with another man as a spy and at the trial of Lamberton, later, testified that he had heard the Indians say that they had been bribed and that Lamberton had promised to sell arms and powder to the savages.

For the year 1655 he received from the company fifteen Riksdaler per month compensation (about eighteen dollars) in silver as compared to the salary of the commandant which amounted to seventy-five Riksdaler monthly. Not satisfied with this small return from his professional duties, he quickly took profitable advantage of trading opportunities in the new colonies and we frequently find his

name in the minutes of the administration of the vice-director and his council at the Delaware. Among a group of others, he signed a trade agreement at the beginning of the year 1657 setting prices on various items for the ensuing year. In January 1656 he was ordered to give an "affidavit of the cure" of some soldiers on the South River. (10)

In 1655 the ship "Mercurius" was obtained and Heindrich Mundt was hired as the barber-surgeon for the twelfth expedition. The eleventh expedition, which had set out in 1654, never did reach New Sweden. Among the passengers on the Mercurius was listed also our friend Hans Janeke. The ship was at sea nearly four months, but the journey seems to have been rather free from casualties and sufferings so common to former voyages, for there is no mention of sick people when the vessel sailed up the Delaware on March 14, 1656. By this time the control of the lands about the South River was completely in the hands of the Dutch. Surgeons Mundt and Janeke did not stay here, under these circumstances, but Timon Stidden remained and treated the ill and wounded to the best of his abilities.

This was approximately the time when the second pandemic of influenza spread over the entire known American continent and scarcely a family at New Amstel, the Dutch stronghold on the Delaware, was exempted; children, as well as adults, were simultaneously afflicted. Other physicians were living at New Amstel at this time, notably the barber, Jan Oosten (or Oosting), who is mentioned in the Dutch records of 1657, (10A), and probably died the following year; and William van Rassenburgh, who was surgeon to the Dutch colony from November 3, 1659, to February 4, 1662. (11) These were the two who were mentioned by Vice-director Alrichs in letters written in September 1658, from which the following is extracted:

"New Amstel and the surrounding country suffered much from sickness as well as other causes. Our actual situation, which is certainly very distressing by an ardent prevailing fever, and other diseases, by which the large majority of the inhabitants are oppressed and broken down, besides that our barber surgeon³ died and another⁴

well acquainted with his profession, is very sick." (12)

Alrichs also wrote that

"William Van Rassenburgh, who came over as a surgeon, puts forth sundry claims against people whom he attended on the passage, inasmuch as his wages did not run at the time and on the voyage, and he used his own provisions. There was on board the ship considerable sickness, accidents and hardships in consequence of a tedious voyage. One hundred souls required at least a hogshead or two of French wine and one of brandy, and a tub of prunes had also to be furnished for refreshments and comfort to those sick of scurvy and suffering from other troubles throughout the protracted voyage, for from want thereof people became so low that death followed which is a pretty serious matter. Here, on shore, I see clearly that the poor, weak, sick or indigent, sometimes have need of this and that to support them, which one cannot easily, or will not refuse; though it be sometimes but a spoonful, frequently repeated, it amounts to more than is supposed. The barber also speaks of a house which Master Jan occupied⁵ as being too small for him; he hath a wife, a servant and child or children also. If he hire, as he says, at the expense of the city he shall be obliged to show a paper to that effect." (13)

Dissatisfied with the troublous state of affairs in the settlement, barber Rassenburgh and several others removed with their families to Maryland early in 1662. He had been a valued member of the small group along the Delaware, and was called, at times, to assist d'Hinojossa in the administration of the colony, and his loss was acutely felt. Two years later he was in New Amsterdam having difficulty again in the collection of his medical fees, as the following court record affirms:

Lysbert Coutrie, pltf. v/s William Rassenburgh, deft. Pltf. demands from the deft. eighty-five guilders in seawant according to a/e. deft. admits the debt; then says he cured the pltf's leg and agreed with her that she should deduct forty guilders, and that he should pay her the remaining forty-five guilders, which he offered. Pltf. denies being in defts. debt; has settled with him. Deft. offers to declare so on oath. Pltf. says if defendant will declare on oath, she will strike off the forty guilders; which the deft. undertaking, he has done so at the hands of the officer. Burgomasters and schepens therefore decrees that the pltf. shall let the forty guilders in question be to the defts. credit and stand for payment on a/e. (14)

On the fifth of September, 1664, the people of New Netherland were alarmed by the threatening English and sent a remonstrance to the director general and the council at New Amsterdam. Among the signatures, we find that of Willem Rassenburgh.

Influenza and pneumonia played havoc with the settlers during the fall of 1658. At this

³ Jan Oosten, probably.

⁴ Probably Rassenburgh.

⁵ This refers to the preceding barber, Jan Oosting.

time, and the year following, the first epidemic of cynanche trachealis is recorded by Webster and it seems the colonials along the Delaware were not spared. This may account for the fact that illness at this time was especially fatal to the children. In October Vice-director Alrichs wrote from New Amstel:

"But few old people die, but a great number of young children, who could not stand it. Six of us fell sick. The members of the council, Hinojosa and Rynvelt, with the sheriff and all the schepens, had a very severe attack and the greatest part remain yet bedridden, but I hope they may ere long recover, as the sickness now begins somewhat to abate."

During the fall and winter of 1658-59 the continued sickness prevailing everywhere throughout the province obstructed the progress of the settlers so that all labor in the field and other undertakings had to be abandoned. The summer of 1659 was bad, too, so that the Vice-director had to report that nearly the tenth part of the people lingered and lived in misery, under continual sickness, fevers and languors. Fully more than 100 persons perished in consequence and a great many cattle were lost. In the fall the agues superseded the lingering diseases of the summer, the neighbors at New Netherlands being equally afflicted, and in desperation the people decided to appeal for supernatural aid. Accordingly, on the 10th of October, 1659, the following order, designating a day of general fasting and prayer, was delivered to Dominie Wellius:

Considering that the righteous God hath visited many and divers inhabitants of this province not only this summer, with painful and long lingering sickness, but moreover, also, that His kindled anger and uplifted hand threatened with many and divers punishments—unless we turn to Him (whom, in our iniquities we have abandoned) in sincere humility and true contrition of heart that He may turn aside His wrath from us, and assist and bless us with His favor, therefore we have considered it most necessary, to that end to proclaim Wednesday, the 15th of October of the current year a day of universal fasting and prayer.—signed P. Stuyvesant. (15)

Such humble wordy prayers and therapeutic fast days were not infrequently resorted to by the Dutch as well as by the contemporary English Colonists on the Atlantic Coast. Reporting to his commissioners in Holland, Alrichs wrote as follows, leaving no doubt as to the prevalence of malaria and scurvy:

"Unhealthiness, sickness, disease, violent and pestilential fevers and other tedious disorders

which have continued every year, whereof many have died. The proclamations of days of fasting and prayer on this account, observed from time to time, and the lists of the dead also sent over, are proofs thereof. All the inhabitants of New Netherlands are visited with those plagues, but none so heavily as our people, which also, nevertheless, continue for at present those here are still for the most part tormented as I myself have been; I am now confined to my bed between two and three months and so severely attacked with tertian ague, that nothing less than death has been expected every other day, and all things were directed accordingly; but now thank God, I begin somewhat to be better, so that at present I begin again to leave the bed for a little while, which inconveniences have consequently been productive of more trouble to us than to other old inhabitants, who apparently have been better able to withstand a bad time.—

Previous letters had promised the sending of assistance of servants, and the last a ship with divers stores—which we have anxiously expected, as well as refreshments for the common people; viz., prunes, currants, French wine, etc., as 'tis impossible in this vexatious sickness to live without them.—" (16)

The following winter (December 1659) Alrichs wrote:

"The Rev. Wellius was yesterday buried. He died on the 10th day of his illness. I, too, was last Monday night attacked by an ardent fever; my breast became suddenly oppressed with violent pains in the side, so that I appeared in a very forlorn situation. I discharged during these days and nights, nothing but bloody flux, by a copious discharge so that the sight of it created a great alarm which debilitated me so much that I can scarcely go alone with great difficulty." (17)

This dysentery in December might well have been typhoid fever.

With so much illness rampant, surgeon Willem van Rasenburgh was in great demand and since the Dutch officials were at odds with the Swedes, they did not care to employ the Swedish physician, Timon Stidden. Accordingly Jacob De Commer was sent as surgeon when Beekman applied to his superiors on the North River for medical relief in the following letter to Stuyvesant, dated Alteno April 6, 1660:

"Mr. Tymen has spoken to me at different times and made others also speak to me about his appointment as surgeon here in the service of the company. I referred him from time to time to your honor. We require here, under correction, a surgeon, for it has happened already several times, that Mr. William, the City's surgeon, was much needed, but that he could not come here, having some patients there and coming here that he would not have such meditations with him as the patients required, causing thereby delay to the sick." (18)

Samuel Hazard (*Annals of Penna.* p. 308) and practically all subsequent local historians,

name Peter Tyneman as having been a surgeon to the settlements along the Delaware in 1660. This is a mistake which has been continued by endless repetition and at this point, thanks to the kindness of Mr. A. J. F. Van Laer, Archivist at the State Department of Education, Albany, New York, it is now possible to state unequivocally that this mythical gentleman was none other than the selfsame Tymen Stidden so often encountered in these annals. Looking up the original letter in question, Mr. Van Laer writes, in part, as follows:

"The letter of William Beekman to Stuyvesant dated April 6, 1660, which is quoted by Hazard, is in N. Y. Col. Mss., vol. 18, p. 83. A translation of it by Berthold Fernow is in Doc. Rel. to Col. Hist. N. Y., Vol. 12, p. 300-302. In it the name of the surgeon is given, not as 'Peter Tyneman,' but as 'Mr. Tymen.' I have looked up the original letter and find that Mr. Fernow's translation is correct. The Dutch text has Mr. Tymen, in which Mr. stands for *Meester*, meaning *heer*, *meester*, or surgeon.

I also noticed that the name of the man who applied for a patent is Pieter Mayer, not Peter Moyer, as in Hazard."

The same correspondent, Mr. Van Laer, has also corrected two other discrepancies which have crept into the historical records. Joseph M. Toner, in his noteworthy "Contributions to the Annals of Medical Progress and Medical Education in the United States," published by the Government Printing Office at Washington, D. C., in 1874, on page 39, mentions Michiel de Marco Chertz (or Chertser) as surgeon and Dr. Jacob von Belcamp as druggist at New Amstel. Of these individuals Van Laer in a personal communication wrote as follows:

"This name (de Marco Chertser) occurs in Docts. Rel. to Hist. N. Y., Vol. 2, p. 191, in an account of supplies sent by the city of Amsterdam to the city's Colony of New Amstel, on the Delaware, as Michiel de Marco Chertser, surgeon. It is evident, however, from the nature of the account, that he was not a surgeon on the Delaware, but at Amsterdam, Holland. The amount paid to him was for a chest of instruments, sent to Surgeon de Commer.

The same is true of Jacob van Belcamp, druggist, whose name appears in the same account on P. 193 of Vol. 2 of the above mentioned Colonial Documents and who therefore was also a resident of Amsterdam. His name is also mentioned in the *Correspondence of Jeremias van Rensselaer*, p. 75 and 351, published by this department in 1932."

Jacob de Commer as early as 1600, or earlier, was the company surgeon of New Amsterdam but subsequently removed to New

Amstel, on the Delaware. (19) Tymen Stidden tried hard to get the appointment as surgeon on the Delaware in the service of the Dutch company, but apparently due to the enmity of d'Hinojossa, de Commer was preferred for the situation. When, in the summer of 1662, a soldier was shot in a drunken brawl, de Commer, as colony surgeon, was called upon to dress the wound and witnessed the ante-mortem statement of the victim. Later we find him testifying at the trial of the murderer where the youthful surgeon declared his own age to be about 27 years. When he left the settlement at South River in 1663, he recommended Timon Stidden to fill his place, but d'Hinojossa, the director, rejected Stidden on the grounds that he was a friend of Beekman's.

In 1661 the public service among the Dutch included one director, commissary, cooper, smith, surgeon, and comforter of the sick who was also to act as schoolmaster. Evert Pietersen was this comforter of the sick. He came to the colony with Alrich in April 1657 and was the first schoolmaster on the Delaware. The pedagogue was expected to supplement the preacher in many of his duties and the duty of consoling the sick devolved equally upon domine and schoolmaster, from which the latter earned the title of "Zieckentroster." While his status as a man of extended reading gave him some knowledge of medicines and their applications, he was expected rather to read and pray with the sick, an office considered more important than the temporal ministrations of the barber-surgeons.

Evert Pietersen, when he came over on the Gilded Beaver, had a fixed salary of 36 guilders per month and 125 guilders annually for his board. His first school at Fort Casimir had an attendance of twenty-five children, nearly all Swedes. Shortly after 1661 he replaced the schoolmaster at New Amsterdam, where he continued in office after the English occupation. He was married when he came to this country, but later lost his wife, and following the precedent of his profession, married a widow and became one of the most substantial citizens of New York. (20)

In a letter written in 1662 by Vice-director Beekman to Stuyvesant, "An old man" is

mentioned to have been murdered by the Indians and examined by Timon Stidden, the surgeon. Dr. Stidden, at this time resided at Upland (now Chester, Pa.). There he testified against an unruly Finn, telling unpleasant experiences of the man and declaring that "he had neither security nor peace, but was obliged to leave Upland's Kil because of the ruffian." The whole testimony sheds some light on the peculiar difficulties of early medical practice, as well as a picture of one precarious mode of transportation the doctor used to reach some of his scattered patients. In part it reads as follows:

"Mr. Tymen Stidden complains that when he was summoned by Jacob Swenson to bleed him and went there in his canoe, Evert the Finn saluted him so with stones, on leaving the Upland's Kil that he was in danger in his canoe at least of being wounded, he managed finally to get out of the kil, however, but was thoroughly drenched by the splashing of the stones from the bank, without knowing the reason why." (21)

Leaving Upland, Stidden settled permanently at Christina, became an extensive landowner, purchasing much of the ground now occupied by the city of Wilmington. His title to this land was later confirmed by Colonel Lovelace, Governor General of this territory after the English occupation. The grant to Stidden is dated Fort James, in New York, the old Fort Amsterdam, the 23rd May, 1671 and is quoted by Benjamin Ferris in his "History of the Original Settlements on the Delaware."⁶

Timon Stidden died in the spring of 1686; for more than 30 years he was one of the active pioneers resident in this region. The doctor was twice married, had several children and numerous descendants. One of his posterity preserved the metal case (now unfortunately lost) in which he carried his surgical instruments on visits to his patients of the early Swedish colony, interestingly authenticated by bearing the name and title engraved upon it. (22) Another descendant, Colonel George A. Elliott, now president of the Historical Society of Delaware, owns an interesting and rare copy of an old English herbal believed to have once belonged to Stidden. Through the kind courtesy of the owner, I am enabled to reproduce the title page, the last

page of "The Booke of the Seynge of Waters" (included in the same volume) and the colophon at the back of the volume. In Dibdin's *Typographical Antiquities* (London, 1819, Vol. 3, p. 133) it is listed by Joseph Ames under a bibliography of William Copland's books as "No. 884—The Properties of Herbes, 1552, Octavo," as having been described by Herbert from an imperfect copy. William Copland was an early English printer, working at some time in the printing shop of the famous Wynkin de Worde, who in turn was the successor, I believe, of Caxton. Eleanor Sinclair Rohde, in "The Old English Herbals" (London, 1922) mentions two other editions of this Bancke's herbal from Copland's press and then in a footnote says that no known copy of this one printed for Richard Kele is known to exist. It may be, then, that this intriguing medical work, probably often consulted by Stidden 250 years ago, is now unique.

The burden of the care of the sick usually fell upon the sturdy women of the settlements and many acquired fame for their remedies. Cobb's Creek was once called Amas-land Creek and the land round about was designated Amesland or "Country of the Nurse" by the Swedes because a nurse had formerly lived there. Amas-land was also known as Carkoens, a corruption of the Indian name for the creek, "Kakarikonk or Karakung." Near the site of the Blue Bell Tavern was erected the first water mill in Pennsylvania where the Darby Road (now Woodland Avenue), the oldest highway in Pennsylvania, crosses Cobb's Creek, and the holes sunk into the rock in which the posts that supported the framework of the mill were placed are still to be seen.

Nearby, the first insane asylum (if I may call it such) was built in 1678, as noted in the following records: (22a)

"Jan Cornelissen, of Amesland, complains to the Court, that his son Erick is bereft of his natural senses, and is turned right mad, and that he, being a poor man, is not able to maintain him. Ordered: that three or four persons be hired to build a little block house at Amesland, to put him in, and at next court an order will be taken that a small levy be laid for building the house and maintaining the madman according to the laws of the government."

There was a provision in the Duke's Laws as to the conditions of distracted persons

⁶ Wilmington, 1846, p. 193.

which directed the mode in which the charge for their support was to be levied.

Little is known of the exact nature of the diseases which afflicted the early settlers. Agues, fevers, apoplexies, burns, scalds, wounds and broken bones, serofula and the King's evil, pleurisies and pneumonia, consumption, scurvy, quinsies, scarlet fever and cynanche, dysentery, typhus and typhoid, small pox, yellow fever, measles, worms, and the difficulties incidental to childbirth were only some of the disorders with which the early barber-surgeons had to contend. The records of the times are not often clear as to just what ailment prevailed. At times the effects of famine and want were frightful and the poor protection against the inclemencies of the weather often led to pneumonia in the winter and sunstroke in the hot summer. As a rule the barber-surgeons, being in the guild class, were fairly well recompensed when contingencies permitted, but in a communication of Alrichs to Stuyvesant, there is mentioned one at New Amstel who was apparently in straitened circumstances. October 29, 1657, the director wrote: "Surgeon Ludekens is also here with his wife, who say, they have friends at the Manhattans, to pay the expenses and clothing, since they are bare and deprived of everything. If it is so, that there is anything to be expected from there, I would like your honor would please give information of it by letter." (23) Evidently the man was a fraud, for five months later Alrichs again mentioned

"a certain David Ludekens, whom with his wife, they being naked and needy, I have again fitted out and helped with garments; he afterwards ran away from here stealthily, without paying anything and I have received a letter from him from the Manhattans, where he is living somewhere, he promises at least to pay a part of it—in the interests of the city I request that he be directly arrested and sent to the Hon. Governor of Virginia by first chance, in order to satisfy his Honor." (23A)

These barbers were probably well versed in the medical knowledge of the seventeenth century. This was the era of the famous Dutch universities at their prime. At Leyden were Sylvius, Ruysch and Bidloo; at the Hague, Van Deventer and Solingen; Swammerdam at Amsterdam, where also, Nicholas Tulp was the celebrated regent and physician. When, on September 7, 1657, the Commissioners of

the Colony in New Netherlands applied to the city of Amsterdam for funds to send another ship hither, Messrs. Tulp, et al. were "commissioned and requested to consider and examine the said matters maturely and to report their conclusions and opinion accordingly." (24) Their mature deliberation led to an unfavorable report and the application for funds was denied.

Van Helmont's mystical opinions were not unknown even to the laity. Two Dutch Labadists in 1679 stated that at a home in Burlington, New Jersey, they saw a copy of Van Helmont's medicine lying on the window just as if it had been a commonplace book. (25) Alchemy greatly influenced medical practice of the period, and the "weapon salve" of Sir Kenelm Digby, known to Winthrop in New England, was in all likelihood not unknown to the inhabitants of New Sweden. When the small pox broke out among the Indians the Vice-director at New Amstel wrote to New Amsterdam:

"I earnestly solicit that I may receive, by first opportunity, at my expense, what theriacal, mythridat senna leaves, and other purgatives and cooling remedies as are of service in that sickness, as no medicines are obtainable here." (26)

Simples abounded and the use of many native herbs was learned from the Indians, the women of the province becoming especially adept in the concoction of these harmless, but satisfying remedies. Kalm, in his "Travels," stated: "An old Swede remembered that his mother cured many people of a dropsy by a decoction of the root of the sassafras in water (drank every morning) but she used at the same time to cup the patient on his feet." (27)

The use of various baths, common among the Scandinavians, was resorted to for hygienic reasons with great regularity. Kalm (28) learned from an old Swede that before the coming of the English, almost all the Swedes made use of the baths, and they commonly bathed every Saturday. A steam bath was erected on Tinicum Island by the colonists soon after the arrival of Governor Printz.

Venesection was of course the universal recourse of the barbers; and cupping, tooth drawing, the application of setons, bone setting and the treatment of wounds comprised the routine work of the day. Uroscopy, a fea-

ture of nearly all the contemporaneous Dutch works of art depicting the doctor of that day and age, was surely cultivated assiduously and stressed in diagnosis and prognosis. The good Heelmeester Timon would no doubt often resort to his "Booke of Seynge of Waters" to clear up the import of a puzzling bottle.

The belief in witchcraft was prevalent and superstitions played a large part in the life of the settlers. Amandus Johnson mentions the belief that bleeding is stopped by grasping around the sore with the hand and repeating the formula. "Thou shalt stand as firm as Jordan stood, when John baptized in the name of the Father, of the Son, and of the Holy Ghost." In times of great stress the ravages of disease were considered supernatural visitations in retribution for sin and proclamations of days of fast and prayer were often resorted to in order to placate angry Deity and thus end pestilence.

It is unfortunate that no direct writings have come down to us from the quills of these pioneer medical men. There was no printing press among them and so far as I can discover, none ever took any apprentice to continue the art among the settlers on the Delaware. Few of these doctors tarried very long; some died here, and others for the most part, departed when the term of service was done.

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REFERENCES

1. Swedish Settlements on the Delaware, Amandus Johnson, Phila., 1911, Vol. 1, p. 110.
2. B. Fernow, Doc. Rel. Col. Hist. N. Y., Albany, 1858, Vol. XII, p. 19.
3. History of Epidemic & Pestilential Diseases, Hartford, 1799.
4. Early Physicians of Philadelphia & Its Vicinity, Phila., 1886.
5. Hazard, Samuel: Annals of Pennsylvania, 1850, p. 49.
6. Myers, Albert Cook: Narratives of Early Pennsylvania, West Jersey & Delaware, New York, 1912, p. 116.
7. Keen, G. B.: Report of Governor Printz, Penna. Mag. Hist. & Biog., 1883, Vol. VI, p. 271.
8. Johnson, Amandus: Swedish Settlements on the Delaware, Vol. 1, p. 248.
9. Meyers, A. C.: Narratives of Early Pennsylvania, etc., p. 110.
10. Keen, Jonas: Descendants of Joeran Kyn, Penna. Mag. Hist. & Biog., Vol. III, 1879, p. 337.
- 10A. Letter of Vice-Director Alrichs to the Commissioners of the Colony on the Delaware, dated Fort Amstel, May 25, 1657, in Brodhead, J. R.: Documents Relating to the Colonial History of the State of New York, Vol. II, 1858.
11. Toner, Joseph M.: Medical Progress in the United States, Washington, D. C., 1874.
12. Hazard, Samuel: Annals of Pennsylvania, Phila., 1830, p. 247.
13. Henry, F. P.: Standard History of the Medical Profession of Philadelphia, Chicago, Ill., 1897, p. 19.
14. Records of New Amsterdam from 1653 to 1674, Edited by Berthold Fernow, N. Y., 1897.
15. Brodhead, J. R., Doc. Rel. Col. Hist. N. Y., Vol. II, p. 78.
16. Ibid., p. 113.
17. Hazard's Annals of Pennsylvania 1609-1682, Phila., 1850, p. 297.

18. Fernow, S., Doc. Rel. Col. Hist. N. Y., Vol. XII, p. 399.
19. Toner, p. 39.
20. Van Vechten, Emma: Historic New York, N. Y., 1921, p. 321.
21. B. Fernow, Doc. Rel. Col. Hist. N. Y., Vol. XII, p. 426.
22. Jonas Keen, Descendants of Joeran Kyn, Penna. Mag. Hist. & Biog., Vol. III, 1879, p. 337.
- 22A. Edward Armstrong: Record of the Court at Upland in Pennsylvania, Mem. Hist. Soc. Penna., Vol. VII, 1869, p. 102.
23. B. Fernow, Doc. Rel. Hist. Dutch & Swedish Settlements on the Delaware River, Albany, 1877, p. 201.
- 23A. Ibid., p. 205.
24. J. R. Brodhead, Doc. Rel. Col. Hist. N. Y., Albany, 1856, Vol. II, p. 21.
25. James J. Levick, Early Physicians of Philadelphia, Phila., 1886.
26. Hazard's Annals, p. 342.
27. Peter Kalin, Travels into North America, translated by John Reinhold Forster, F. A. S., in John Pinkerton, Collection of Voyages & Travels, etc., London, 1812, Vol. 13, p. 485.
28. Ibid., p. 541.
29. Swedish Settlements on the Delaware, p. 544.

OLD DELAWARE FEE BILLS— A BIT OF HISTORY

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With one of the crying needs of the day a better understanding of the problems that are generally encompassed under the broad heading of "medical economics," it is of more than passing interest to know what the medical profession usually charged in days gone by for certain services. As a small contribution to this subject, we reproduce in this issue of THE JOURNAL two Fee Bills, now the property of the library of the Delaware Academy of Medicine.

The first Fee Bill is that of the Kent County Medical Society and was donated by the Society to the Academy a couple of years ago. It was adopted by the thirty physicians who then composed its membership on August 2, 1854, and they had the good sense to make it unanimous and to append their names thereto, pledging their professional honor to conform to the schedules. We have no record of any trials or dismissals for failure to conform, so it may be assumed that both profession and public found the charges fair for the times. The Bill is, of course, that of the general practitioner, for this was before the day of the specialist, yet many operations were included that no general practitioner of today would attempt. It was also before the hey-day of the medical school in this country, hence the interesting items concerning the student fees for the "course of reading"—a one-man university that turned out an amazing number

(Continued on Page 229)

*Editor, Delaware State Medical Journal.

FEE BILL

ADOPTED BY THE

KENT COUNTY MEDICAL SOCIETY,

AUGUST 2, 1854.

Primary Visit in Town, - - -	\$1.00	Rising at night, without going out, - -	\$1.00
Each succeeding Visit in Town, - - -	.50	Attendance upon a case of natural labor,	
Visit in Country, not exceeding two miles, 1.00		when not detained more than six hours,	
" " each additional mile, .25 to .50		in addition to the fee for visit, -	\$5 to 8.00
Visit at night, or in storms, double the		do. do.—When detained more than six	
above rates.		hours, each additional hour, -	.50 to 1.00
Primary Consultation Visit, in addition to		Attendance upon a case of preternatural	
the fee for an ordinary visit, - - -	\$5.00	labor, - - - - -	\$10 to 20.00
Succeeding consultation visit, do. do. \$1 to 2.00		" " —Instrumental labor, - -	15 to 30.00
Detention at patient's house, (per hour,) .50 to 1.00		Delivery of placenta, - - - -	5.00
" " all night, - - -	\$5 to 10.00	In Obstetric cases, all subsequent visits	
Verbal Advice, at physician's house, .50 to 1.00		to be charged for.	
Written " " " - - -	\$1 to 5.00		

IN ALL CASES, ALL SERVICES RENDERED AND MEDICINES GIVEN, TO BE CHARGED FOR, IN ADDITION TO THE VISIT, ACCORDING TO THE FOLLOWING TABLE.

Venesection, Ext. Teeth, and Securing Gums, -	.50	Reduction of Luxations, - - - -	5 to 10.00
Opening small Abscess and Cupping, (each cup,) -	.50	and Dressing of Fractures, - - -	10 to 20.00
" large " and Vaccination, - - -	\$1.00	Operation for Fistula in Ano or Lachrymals	20.00
" Mammary Abscess and applying dressing, -	2.00	Hare Lip, - - - - -	15 to 25.00
Administering Emula, - - - - -	1.00	" Strabismus and Childbed, - -	25.00
Introducing Seton, Sutures and Issues, - - -	\$2 to 5.00	" Antrismus, - - - - -	50 to 100.00
Primary Introduction of Catheter, - - -	3.00	" Cancerous Mammas, - - -	30 to 50.00
Subsequent " " " - - - - -	1.00	" Hernia, - - - - -	40 to 75.00
Primary Introduction of Speculum Uteri or Recti, -	5.00	Reduction of Hernia by Taxis, - -	5 to 10.00
Subsequent " " " - - - - -	2.00	Amputation of Thigh, Leg, Arm or Forearm, -	20 to 50.00
Excising Uvula, Tonsils, Excising Hemorrhoidal Tumors		Excision of Testicles, - - - -	25.00
and Amputating Fingers or Toes, - - -	5.00	Trephining, - - - - -	25 to 75.00
Dressing Wounds—according to their magnitude, -	1 to 10.00	Extracting Cataract, - - - -	50.00
Excision of small Tumors, - - - - -	5.00	Conching " " " - - - -	30.00
" large " " " - - - - -	10 to 20.00	Tracheostomy, - - - - -	25.00
Paracentesis Abdominis or Thoracis, - - -	10.00	Gonorrhoea, - - - - -	10 to 30.00
Ext. Polypus from Nose, - - - - -	10 to 20.00	Syphilis, - - - - -	40 to 50.00

Emetic or Cathartic, - - - - -	25 cts.	Epileptics, - - - - -	25 to 100 cts.
Aperient or Corrosive Pills, (each)	4 to 10	Lunatics or Emulsions, per oz.	25 to 50
Powders, - - - - -	4 to 10	Mercurial Ointment, " "	50
Single Anodyne, - - - - -	25	Ordinary " " " - - - -	25
Opious Mixtures, per oz. - - - -	12 1/2	Peruvian Bark, " " "	50
Tinctures and Elixirs, per oz. - -	25 to 50	Quinine, per gr. - - - -	4 to 10

FEE FROM A STUDENT, for the whole course of reading, (three years.)	\$200.00
" " " (one year.)	100.00

We, the undersigned, Members of the Kent County Medical Society, unanimously adopt the above Fee Bill, this 2d day of August, 1854, and pledge our professional honor to conform to our charges, from this date, to its provisions.

WM. BURTON
THOS. PARSONS
ROBT. H. CLARK
H. C. COMEGYS
R. S. CHUBBETH
WM. CUMMINS
C. A. COWGILL
ED. D. DAILEY
WM. DANIEL
EZERIEL DAWSON

VINCENT EMERSON
SAM. M. FISLER
JOSEPH ADDISON GOODWIN
THOS. D. HUBBARD
W. MITMAN JONES
ISAAC JUMP
MARK G. LOFLAND
JAMES R. MITCHELL
JOHN R. MOORE
WM. W. MORRIS

A. H. SANCORN
JOSEPH SANCORN
JOHN W. SHARP
JOSEPH SIMPSON
WM. W. STUART
LUTHER SWIGGETT
WM. MCK. TAYLOR
JAMES H. THOMAS
ALBERT WHITELEY
H. FISHER WILLS

FEE BILL

ADOPTED BY THE

MEDICAL ASSOCIATION OF WILMINGTON, DEL.

Fee from a medical student for the whole course of reading
three years, - - - - - \$200 00
Fee from a medical student for one year's reading, - - - - - 100 00
do do do for each subsequent year, - - - - - 50 00
Primary visits in the city, each - - - - - 1 00
Subsequent visits do do - - - - - 50 to 1 00

[If more than one member of a family (schools excepted) are attended at the same time, the charge ordinarily will be one half for such case or cases.]

Fee for primary visits in special cases (such as Small Pox, malignant Scarletina and other similar diseases of a virulent character,) each, - - - - - 2 00 to 5 00
Subsequent visits do do do each 1 00 to 2 00
Primary consultation visits, each - - - - - 5 00
Subsequent consultation visits, each, - - - - - 1 00 to 2 00
Primary consultation visits, in Surgical and Obstetrical cases, - - - - - 5 00 to 8 00

[In consultation visits at night, the additional sum for night visits shall be added.]

Fee for a written history of a case to a Physician at a distance, - - - - - 5 00 to 10 00
Visits at night without detention, - - - - - 2 00 to 3 00
Rising and prescribing at night without going out, 1 00 to 2 00
Primary advice at Physician's house during the day, 50 to 5 00
Subsequent advice do do do do 50 to 1 00
Visit over 3 and under 5 miles - - - - - 2 00 to 3 00
Each additional mile, - - - - - 50 to 1 00
Visit under 3 miles, - - - - - 1 00 to 2 00
Visits to the country, made after dark and up to 10 o'clock P. M., under 3 miles, shall be, - 2 00 to 3 00
Visits to the country made after dark, and up to 10 o'clock, P. M., over 3 and under 6 miles, 3 00 to 6 00
For each additional mile over 6 - - - - - 1 00
Visit and attendance all night, - - - - - 5 00
do do at night when detained, for each hour, 1 00
[This charge will not exceed \$5 for a night, and is not applicable to Obstetrical cases.]

OBSTETRICS.

Fee for cases of natural labor when not detained more than 12 hours, and subsequent attendance not exceeding 4 days, - - - - - \$6 00 to 12 00
For preternatural labor, or when detained more than 12 hours, - - - - - 10 00 to 20 00
Instrumental labor (forceps) - - - - - 12 00 to 20 00
do do (crochet or removal of limb) 20 00 to 30 00
Medical attendance on lying-in women, not exceeding four days, when the child and placenta have been delivered, (in town) - - - - - 5 00
Delivery of placenta alone, - - - - - 5 00 to 12 00

OPERATIONS.

Fee for Lithotomy, - - - - - \$50 00 to 100 00
Lithotripsy, - - - - - 50 00 to 100 00
Extracting cataract, - - - - - 30 00 to 50 00
Couching, - - - - - 20 00 to 30 00
Hernia, by operation, - - - - - 30 00 to 50 00
do by Taxis, - - - - - 5 00 to 10 00
Extirpation of testicle, - - - - - 20 00 to 30 00
Paracentesis thoracis, - - - - - 20 00

Fee for Paracentesis abdominis, primary operation, 10 00
subsequent, - - - - - 5 00
Fistula in ano, - - - - - 15 00 to 25 00
Operation for hair lip, - - - - - 10 00 to 20 00
Extirpation of large Wens, - - - - - 10 00 to 20 00
small do - - - - - 5 00 to 10 00
Removal parotid gland, - - - - - 50 00 to 100 00
Amputation at the shoulder or hip joint, 50 00 to 100 00
do thigh or leg, - - - - - 30 00 to 50 00
do arm or fore arm, - - - - - 20 00 to 30 00
do fingers and toes, each, 5 00
Reduction and dressing simple Fracture, 6 00 to 12 00
do do compound fracture, 12 00 to 20 00
do do luxation of large joints, 10 00 to 30 00
do do small do 5 00 to 10 00
Re-dressing fractures, luxations and wounds in addition to the fee for visit, 50 to 1 00
Trephining, - - - - - 20 00 to 30 00
Division of tendons and muscles in deformity, each 5 00 to 20 00
Aneurism of large vessels, - - - - - 30 00 to 50 00
do by anastomosis, - - - - - 30 00 to 50 00
do of small vessels, - - - - - 10 00 to 30 00
Operation for hydrocele, - - - - - 5 00 to 15 00
Extracting polypus from nose, - - - - - 5 00 to 15 00
do cancerous mamma, - - - - - 30 00 to 50 00
Operation for fistula lachrymalis, - - - - - 10 00 to 20 00
do for artificial joints the same charge as for amputation of similar bones,
do for fungus in antrum, - - - - - 50 00 to 100 00
do for necrosis, - - - - - 5 00 to 20 00
Dressing simple incised and lacerated wounds without sutures - - - - - 2 00 to 5 00
Dressing wounds, when arteries are taken up 5 00 to 10 00
Extirpating hemorrhoidal tumors, enlarged tonsils, operation for varicose veins, cutting off uvula, &c. &c. - - - - - 3 00 to 10 00
Tracheotomy, - - - - - 10 00 to 20 00
Introducing catheter, first time, - - - - - 3 00 to 5 00
do do subsequently, - - - - - 1 00 to 3 00
do setons and issues, - - - - - 1 00 to 5 00
Venesection or scarifying gums, or extracting teeth, - - - - - 1 00 to 3 00
Dividing frænum linguæ, - - - - - 1 00 to 3 00
Opening abscess, - - - - - 1 00 to 2 00
Scarifying eyes, - - - - - 1 00 to 2 00

[These charges affixed to minor operations are to be additional to the customary fee for visit.]

Fee for syphilis, - - - - - 10 00 to 50 00
Gonorrhœa, - - - - - 5 00 to 10 00
Subsequent advice at physician's house in syphilis or gonorrhœa, each time, - - - - - 1 00
Vaccination, - - - - - 2 00 to 3 00
Re-vaccination in a single case, - - - - -
do where more than one occurs
same family, for each case beyond the first

When in cases of re-vaccination, disease pursues its regular course

Legal post mortem examination

[In surgical cases, and whenever subsequent attendance is required in obstetrical cases, in consequence of acute disease, the rate of charges shall be the same as in medical cases.]

OLD DELAWARE FEE BILLS — A BIT OF HISTORY

(Continued from Page 226)

of excellent practitioners, though these gentlemen rarely acquired the prestige that clung to the graduates of the formal medical schools, of which the country at that time boasted a bare dozen.

NEW CASTLE COUNTY MEDICAL SOCIETY

—FEES—

OFFICE VISITS - - \$1.00 and up

HOME CALLS

First Visits

7 A. M. to 5 P. M. \$3.00

5 P. M. to 9 P. M. \$4.00

9 P. M. to 7 A. M. \$5.00

Subsequent Visits

7 A. M. to 5 P. M. \$2.00

5 P. M. to 9 P. M. \$3.00

9 P. M. to 7 A. M. \$5.00

CONFINEMENT CASES - - \$35.00

EXTRA CHARGES

Additional Members of the Family

Treated at Home—\$1.00 and up

Country Calls - - Fee plus mileage

Nov. 19, 1929

Historically the Bill outlines those procedures that were most commonly encountered in a general practice, and they do this more conclusively than did the textbooks of that day on medicine, surgery, or obstetrics, for these texts give scant idea of the frequency of the lesions described. The most interesting item in the Kent Bill is "couching," a term that the present day general practitioner is totally unfamiliar with. The ophthalmologist may recognize it as the dislocating of the optical lens, an inferior operation that was resorted to when it was not feasible to totally extract the cataract. The present-day texts on ophthalmology do not mention it.

The second Fee Bill is that of the Medical Association of Wilmington, which was recently presented to the Academy by Mr. Arthur

L. Bailey, librarian of the Wilmington Institute Free Library. Mr. Bailey has no data as to how or when it found its way into his library. His generosity in donating it to the Academy is much appreciated.

Here again we find a list of the commoner procedures, somewhat lengthier than that of the Kent Bill, but this would be expected in the metropolis of the state—an urban population would require a fuller schedule than would a rural one. We find also that medicines are not included, since the city boasted a few apothecary shops. But we do find again "couching," and student fees—evidently the University of Pennsylvania had serious competition in the Delaware metropolis.

The Wilmington bill is not dated, yet we believe it antedates the Kent Bill, and for the following reasons: First, a fee schedule is more likely to originate in a metropolitan area than in a rural one. Second, the pioneer Bill in this state, which this one probably is, could very well be undated—they simply did not think of that. Third, the Bill does not contain the names of the members: that idea probably came later. Fourth, the operation for hare lip is spelled "hair," and was corrected when the Kent Bill was printed later. Finally, it does not contain the imprint of the printer.

The city schedule is slightly lower than the county one in several important items. This might have been due to the increased competition in the larger community.

The uncertainty of the date of the Wilmington Fee Bill is unfortunate, but even more so is the loss of the records of the original medical society in Wilmington or New Castle county. The present county society was organized in Wilmington in 1901, but there was a previous organization in the city and county for many years before that, which seemed to lose its vitality about 1895 and passed into a state of innocuous desuetude. It is possible, even probable, that the prior organization was the one whose Fee Bill we now have.

The Sussex County Medical Society was organized at Georgetown on December 15, 1863, and we find that the Kent County Medical Society was so mature as to need a Fee Bill in 1854. What we wish now is more data on the founding of the societies in New Castle

and Kent Counties, and if any of our readers can shed any light on this subject we shall appreciate it very much.

Contrasting the uncertainty of our county records with the clarity of our state records, we find that the Medical Society of Delaware was incorporated by a special Act of the General Assembly on February 3, 1789, thus making it the third oldest medical society in the United States, being antedated only by the Massachusetts and New Jersey Societies; also making it the second to be incorporated, yielding priority only to the Massachusetts Society.

Also by way of contrast, we reprint a recent (1929) fee schedule of the New Castle County Medical Society, which is conspicuous for its brevity, and if it be true that brevity is the soul of wit, this schedule ought to be very funny. As a matter of fact it is—it represents a slight upping of the previously prevailing charges, but it is dated November 19, 1929, just three weeks after the financial collapse of October, 1929. Imagine raising the prices in the face of a money panic! Yet the funnier aspect is that nobody at that time thought it was a panic, or the beginning of a prolonged depression—the diagnosis was missed completely. As the result of the dislocated times, this schedule is somewhat out of joint and has not been adhered to strictly. Even if it were, a comparison with that of the earlier Wilmington Fee Bill shows that, in the eighty or ninety-year interval, the cost of medical care has risen less than that of any other necessary commodity which the public has to buy, believe it or not.

WOMAN'S AUXILIARY: A. M. A.

To the Members of the Auxiliary:

By the time this first issue of the 1936-37 News Letter is published the presidents of state and county Auxiliary groups will have received letters outlining the objectives of this administration. Our aims are simple and our ways of accomplishing them should be direct and simple as well. The Auxiliary is free of politics and red tape—let us strive to keep it so. Our name tells a great deal—Webster defines the word Auxiliary, when used as a noun, as “one that aids or helps.” When the word is

used as an adjective some of the synonyms may seem less flattering for there we find “subservient” and “subordinate” but when we consider that as members of this organization we are willingly subservient and subordinate it is quite a different matter. Now we may be proud that if we cannot be members of the parent body we can at least aid it and place ourselves under its direction.

There are often times when certain individuals within our ranks feel that we should be less dependent. Careful consideration of the aims and objects of our organization as they are set forth in our Constitution shows us the fallacy of this. If anyone feels that the Auxiliary should be entirely independent and act freely without considering the wishes of the greater body, that person has no place in the Auxiliary for by its very name our organization declares itself as a group secondary to a larger one.

During the coming year when a great deal of legislation directly or indirectly concerned with the medical profession will be brought before the public, we can show how clearly we understand our role as “Helpers” by becoming a reserve force acting in the best interests of the doctors. We can accomplish a great deal by following the course laid out for us, by passing on to lay groups the viewpoint of the medical profession, by educating ourselves and others along health lines, and what may be harder for us than the other tasks, by remaining mute and quiescent until we are requested by our medical societies and our advisory councils to become active.

I realize only too clearly that this attitude may be considered mid-Victorian by many readers. Perhaps it is so but many things mid-Victorian have not been bettered and this honest acceptance of a fact that has both biological and sociological bases for truth does not seem to me to be anything shameful. To admit our limitations freely and to make the most of those privileges which are ours often results in greater accomplishment than comes from wasting strength chafing at immovable barriers.

MRS. ROBERT E. FITZGERALD,

Wauwatosa, Wis.

President.

EDITORIAL

DELAWARE STATE MEDICAL JOURNAL

Owned and published by the Medical Society of Delaware. Issued about the twentieth of each month under the supervision of the Publication Committee.

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VOL. VIII NOVEMBER, 1936 No. 11

MEDICAL HISTORY—A NEGLECTED STEP-CHILD

This issue of THE JOURNAL is devoted largely to local medical history—the story of the first physicians who practiced along the shores of the first of the two rivers discovered by Henry Hudson, i. e., the South or Delaware River, whose medical and secular history is interwoven with that of the later discovered North or Hudson River. Our leading story is by Dr. Samuel X. Radbill, of Philadelphia, and is reprinted from the November issue of the *Bulletin of the Institute of the History of Medicine* of the Johns Hopkins University, with the generous consent of the Director of the Institute, Dr. Henry E. Sigerist. The immediate reprinting of a current article is something no small magazine can indulge in very often, yet we are glad to do so this time in order to bring this excellently worked-up

material more generally to the attention of the Delaware profession.

We are happy to state that some of the most valuable portions of this material were found here in Delaware. The first, and main, hero of the tale is Tymen Stidden—a good old Delaware name that persists today as Stidham, of whom there are now three in the Wilmington telephone directory, though none of these is an M. D.

The other article, written by the editor, relates to two old medical fee schedules, one of the Kent County Medical Society, dated 1854, and the other of the old Medical Association of Wilmington, and which unfortunately is not dated. Why do individuals and organizations fail to keep proper records of their doings—and misdoings? The writing of biography and history is one of the most important duties of each and every generation, and while Delawareans have been exceptionally careful to preserve their genealogical records they have failed notably to preserve the records of their “ancient and honorable” medical societies. Wide gaps exist between the founding of the Medical Society of Delaware in 1789 and its centennial meeting in 1889. If any of our readers can supply us with any of this missing material, or with hints as to where it may be found, we shall be most grateful for the lead and will be glad to follow through. The same thing applies to the earlier history of the medical societies in New Castle and Kent Counties, which are now shrouded in obscurity.

The tercentenary of the landing here of the Swedes will be celebrated in Wilmington in 1938, probably in the joint presence of the President of the United States and the Crown Prince of Sweden. We would be happy indeed were we able to contribute to that occasion an adequate medical history of those early Swedes and their American successors. And when we say “we,” we speak impersonally: who will essay the role of historical god-father and place a decent garb upon our neglected step-child?

DELAWARE ACADEMY OF MEDICINE

The pathological conferences will be held again this winter at the Delaware Academy of Medicine. In an attempt to increase interest and attendance at these conferences three changes have been made. We have decreased the number of conferences to five beginning in November and ending in March. Each conference will begin promptly at 9 p. m., and end at 10:30. Drs. Robinson and Miller will again present pathology and radiology, but their time will be limited, and some time will be allotted to our own pathologists and clinicians to present cases of local interest.

These conferences are of interest to practitioners of all branches of medicine and surgery.

The complete program is as follows:

November 6—Diseases of the kidneys.

December 4—Diseases of the gall bladder.

January 8—Carcinoma of the lung.

February 5—Cardio-vascular diseases.

March 5—Diseases of the brain.

All conditions, both medical and surgical, are presented by x-rays and pathological specimens.

You are invited to attend these conferences; your evenings will be well spent.

MISCELLANEOUS

Radio Broadcasts

The American Medical Association and the National Broadcasting Company present the second series of dramatized health broadcasts under the title *Your Health*. The first broadcast in the new series was the thirty-second dramatized cooperative broadcast under the title *Your Health*. The theme for 1936-1937 differs slightly from the topic in the first series, which was "medical emergencies and how they are met." The new series is built around the central idea that "100,000 American physicians in great cities and tiny villages, who are members of the American Medical Association and of county and State medical societies, stand ready, day and night, to serve the American people in sickness and in health."

The program is on the Blue network and Pacific network of the National Broadcasting Company.

It should be noted that a station may take the program, or not. If a local N. B. C. station is not broadcasting the program *Your Health*, it is possible that the management may be induced to broadcast the program if it receives evidences of local interest. The committee on education or other appropriate committee of the local medical society might take this matter up with the station management and tender cooperation in giving the program local publicity.

The topics are announced monthly in advance in *Hygeia*, the *Health Magazine*, and three weeks in advance in each weekly issue of *THE JOURNAL*.

The time of the broadcast is Tuesday afternoon at 5 o'clock eastern standard time (4 o'clock central time, 3 o'clock mountain time, 2 o'clock Pacific time).—*Jour. A. M. A.*, Oct. 17, 1936.

Removing Adhesive Tape

The deaths of two football players at Purdue University and the serious burning of several others as a result of the explosion of gasoline focuses attention on the correct method of removing adhesive tape. From time to time, various recommendations have been made as to the easiest methods of performing this task. Every one knows that it is painful to turn up one edge of the adhesive tape and to jerk it suddenly away from the skin. Furthermore, this will pull out the hair and even remove the skin—and give opportunity for secondary infection. Gasoline has been recommended in the past, as well as ether and various volatile oils. Kerosene has also been employed for removal of adhesive tape from the skin. None of these substances meets the optimal indications. For some time ethyl acetate was advocated, but it has a definite fire hazard and is irritating to the eyes, nose and throat. Carbon tetra-chloride is known as a standard fire extinguisher. It is not inflammable and is frequently used for the removal of tape. It constitutes the chief ingredient of some of the well known cleaning fluids on the market. Recently the Council of Pharmacy and Chemistry has voted to accept two solvent preparations proposed primarily for the removal of adhesive tape from the skin. One of these substances consists of 98 per cent dichlorome-

thane and has no fire hazard, since it is non-explosive and non-inflammable. However, it is similar to chloroform in its action and the same precautions are necessary as to its inhalation. The other product is a mixture of approximately 60 per cent carbon tetrachloride and 40 per cent naphtha with a small amount of oil of sassafras. Such a mixture may burn but will not explode under ordinary conditions and in the ordinary sense is considered to be non-inflammable. With any of these preparations there may be some danger associated with the removing of large quantities of tape in small rooms without proper ventilation. This is, however, a minor danger and should not be seriously disturbing. Certainly it is a far less hazard than the use of gasoline anywhere near a source of flame or heat. Coaches and trainers of football teams will do well to equip training quarters with plenty of modern improved solvents so as to eliminate the danger of catastrophe such as that which has thrown a somber atmosphere about the current football season.—*Jour. A. M. A.*, Sept. 26, 1936.

The Nomenclature of "Male Hormones"

The Council on Pharmacy and Chemistry reports that the investigations on the male hormones have advanced to the point at which three chemically pure substances have been obtained from urine and testis tissue; a number of related compounds have been obtained by modifying these substances or by synthetic degradation studies on the sterols and bile acids. The physiologic potencies of the naturally occurring compounds and of some of the other substance have been determined. On the recommendation of the Advisory Committee on the Nomenclature of Endocrine Principles, the Council on Pharmacy and Chemistry adopted the following terms: (a) *Androsterone* to designate the chemically pure hormone $C_{19}H_{30}O_2$, melting point 178 C., obtained from urine (international unit 100 micrograms as assayed by comb growth response in the capon). (b) *Dehydro-androsterone* to designate the chemically pure hormone $C_{19}H_{28}O_2$, melting point 148 C., obtained from urine (capon unit approximately five times the dose of androsterone). (c) *Testosterone* to designate the chemically pure hor-

mone $C_{19}H_{28}O_2$, melting point 154 C., obtained from testis tissue (capon unit from one-tenth to one-sixth the dose of androsterone). (d) *Androgen* to designate substances possessing masculinizing activity. Urinary androgens, testicular androgens or androgenic substances from plant or other sources may or may not contain androsterone, dehydro-androsterone or testosterone. Although the international unit is based on comb growth response in capons, it should be emphasized that this method of assay does not necessarily express the quantitative physiologic activities of different preparations on mammals. Therefore it is highly desirable to determine the physiologic activities of new pure or crude preparations by assays on mammals as well. (*J. A. M. A.*, July 18, 1936, p. 210).

The Nomenclature of Estrus-Producing Compounds

The Council on Pharmacy and Chemistry reports that there are at least seven naturally occurring estrogenic substances that have been isolated in a crystalline condition. As the result of investigations by Butenandt, Cook, Doisy, Marrian and their respective associates the structure of these and related compounds has been definitely established. Two systems of nomenclature have been proposed; one by Girard using the root "folli-" with suffixes to indicate the nature of the compounds; the other by Adam and his collaborators using the root "oestr-" with certain modifications. In view of the importance of Edgar Allen's investigations in opening up the field of the follicular hormone and of Doisy's contributions in isolating the first crystalline estrus-producing compound and the further fact that the Council has approved theelin as a common name, the Advisory Committee on the Nomenclature of Endocrine Principles considered a proposal to retain "theel-" as the root for the names of the estrus-producing compounds. However, in view of the fact that the system of nomenclature devised by Adam and his collaborators has been fairly widely adopted among investigators, it appeared inadvisable to supplant this system even though the new system based on "theel-" was simpler and more nearly in accord with the nomenclature for the androgens.

Accordingly, the Council, on the recommendation of the Advisory Committee on the Nomenclature of Endocrine Principles, decided (1) to adopt the system of nomenclature based on the root *estr-*; (2) to retain *theelin*, *theclol* and *dihydrotheclin* as synonyms for the compounds known in the aforementioned system as *estrone*, *estriol* and *estradiol* respectively; and (3) to adopt the term *estrogenic* to describe those compounds or extracts which in addition to their other physiologic properties produce estrus, and to adopt the noun *estrogen* as the collective term for all the substances having these properties. (*J. A. M. A.*, Oct. 10, 1936, p. 1331).

Papilloma and Carcinoma of Bladder in Dye Workers

G. H. Gehrman, Wilmington, Del. (*Journal A. M. A.*, Oct. 31, 1936), points out that the first aniline tumors of the bladder to be reported in this country were detected in 1931. Prior to 1914 European countries, principally Germany, manufactured about 80 per cent of the entire output of dyes. It was subsequent to 1914 that the dye industry was developed on a large scale in this country. A period of sixteen years elapsed before the first aniline tumors developed to the point of recognition in America. This period closely corresponds to the average time of exposure necessary to produce these tumors. Although it is accepted that certain chemical compounds of the nitro and amino group are responsible for the production of papillomas and carcinomas of the urinary bladder, the exact nature of these compounds is by no means clearly understood; neither is the mechanism of development. Experimental production of tumors of the bladder has been attempted for many years with predominantly unsuccessful results. The most important route of entrance is the respiratory tract, in the form of dust and fumes. Aniline is readily absorbed through the skin. The skin absorption of solid compounds such as *alpha* and *beta* naphthylamine is questionable. Absorption through the gastro-intestinal tract is probably of the least importance. However, it must be remembered that present knowledge indicates a long period of exposure to low concentrations as an etiologic factor. Therefore, any gastro-intestinal absorption

should be considered as of more or less importance, despite the low solubility of these compounds. The age distribution in twenty-four cases of carcinoma show a somewhat higher incidence after 30, but this no doubt is due to the insufficient time of exposure prior to that age. Five years appears to be the minimum and twenty-five years the maximum time of exposure for the development of tumors. The maximal period of exposure—twenty-five years—represents the maximal period of exposure in the present series. More cases may develop as time goes on. These tumors continue to develop even after the patient is no longer exposed. In Germany they have occurred as long as twenty-five years after workers have changed their occupation. The classic symptoms of tumors of the urinary bladder are hematuria, frequency, urgency, burning and pain. These symptoms as a group occur in the author's experience only in those cases which are well advanced. The diagnosis in this series was made by periodic cystoscopic examination and the classification of the tumors by biopsy. Prior to cystoscopic examination, five of the twenty-four carcinomas showed hematuria. Symptoms of frequency, urgency and burning were so inconsistent as to be almost negligible as a diagnostic aid. It has been his experience that cystoscopic examination is the only safe method of early diagnosis of these tumors. Tumors may be single or multiple, papillary or sessile, infiltrating or noninfiltrating, ulcerating or nonulcerating, malignant or benign. The histologic structure and treatment of aniline tumors does not differ from tumors of unknown etiology. Proper methods of plant control and medical supervision will eliminate their incidence. Exhaust ventilation designed to remove any dust or fumes that may escape from any of the equipment is essential. The final disposition of exhausted air is extremely important and the ventilation discharge should be sufficiently remote from all operations to prevent contamination in any area of the plant. Adequate measures of protection in Germany have so successfully protected the workers that no new cases have developed in men who have been employed in these factories since the installation of their protective facilities. Every applicant for work in areas where he will be ex-

posed to aniline, alpha and beta naphthylamine and benzidine should have a cystoscopic examination in addition to a regular complete physical examination. Any disease of the genito-urinary system is a contraindication to employment, as is family history of cancer, history of hematuria or venereal disease. No applicant for this type of work should be accepted who is less than 21 or more than 40 years of age. All workers should have a complete physical examination and cystoscopic examination once a year.

BOOK REVIEWS

The Surgical Technic of Abdominal Operations. By Julius L. Spivack, M. D., Assistant Professor of Surgery, University of Illinois. Pp. 718, with 677 illustrations. Cloth. Price, \$10.00. Chicago: S. B. Debour, Publishers, 1936.

This work is exceptionally complete for a one-volume work on this subject. All the main operations are described step by step, as well as many that are performed only occasionally. The text is singularly clear and explicit, and frequently includes an historical introduction; it always concludes with an excellent bibliography. To many readers, however, the chief merit of the book will be the illustrations, which are unusually well done and are drawn to a scale that permits inclusion of detail without confusion of the main point, making the book in effect a pictorial atlas as well as a technical manual. This is one of the books that every abdominal surgeon will want.

Arthritis and Rheumatic Disease. By Maurice F. Lautman, M. D., Consultant, U. S. P. H. S. Pp. 177, with 12 illustrations. Cloth. Price, \$2.00. New York: McGraw-Hill Book Company, 1936.

In this book the author has very successfully attempted to place the whole picture of arthritis before the lay mind in such a way that it will be very easy for anyone to assimilate. He is perfectly fair in the handling of this most difficult problem. He states frequently enough that arthritis is still far from a solved problem and makes the most timely statements, in view of present medical tendencies, that each case of arthritis must be considered an individual problem in itself and that there cannot possibly be any "cure-all" for such a manifold disease.

The first half of the book deals with the history and nature of arthritis, the second half

with the treatment. In the last three chapters he stresses the need for mutual cooperation and courage between the patient and the physician.

All in all this is a book that can be recommended to any patient suffering from this disease. The physician will do well if he reads it himself.

Nutrition and Therapeutic Values of the Banana—a Digest of Scientific Literature. Pp. 143. Paper. Boston: United Fruit Company.

The title describes this publication of the Research Department of the United Fruit Company. The work digests 292 publications, and is fully indexed.

On the Witness Stand: the Evidence on Compulsory Health Insurance. By J. Weston Walch. Pp. 60. Paper. Price, 10 cents. New York: Medical Society of the State of New York, 1936.

This is a new publication of the Public Relations Bureau, Medical Society of the State of New York, and contains a discussion of compulsory health insurance in the form of questions and answers, of which there are 107.

Mr. Walch will be remembered as the general manager of the Platform News Publishing Company, Portland, Maine. Last year, during the high school debate on the subject of state medicine, his company provided students with handbooks and supplemental material on both sides of the question. At the outset, when he read the subject for debate, his first inclination was to say, "it sounds like a great idea—something the country needs." But as he went into the question he became convinced, as many other debaters were, that America had better have none of it. "The evidence we were facing," says Walch, "despite our attempts to continue neutral, plainly indicated that compulsory health insurance does not render efficient and satisfactory medical service."

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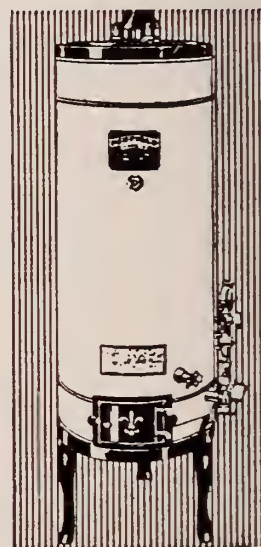
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Am. J. Pub. Health,
25:1334, Dec. 1935

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(1) 1935. Nutrition Abstracts and Reviews 4, 709.
(2) The Pharmacopoeia of the United States of America, Eleventh Decennial Revision, p. 261.

(3) 1936. Report of the Council, J. Amer. Med. Assoc. 106, 1733.
(4) 1935. J. Assoc. Official Agr. Chem. 18, 610.

(5) 1935. J. Home Econ. 27, 658.
(6) 1936. Food Research 1, 223.
(7) 1935. J. Nutrition 9, 667.

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* Proc. Soc. Exp. Biol. and Med., 1934, 32, 241-245
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Arch. Otolaryngology, Mar. 1936, Vol. 23, No. 3, 306-309

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Chicken Pox	12-16 Days	3-14 Days
Diphtheria	2-4 Days	After 12th Day— until cultures negative
Epidemic Meningitis	1st Week	Until cultures negative
Measles	2nd Week	Until 5 days from onset rash
Mumps	3rd Week	Duration of Swelling
Poliomyelitis	3-10 Days	21 Days
Rubella	3rd Week	Duration of catarrh and rash
Scarlet Fever	1st Week	After 21st Day— until cultures negative
Whooping Cough	2nd Week	Until 4 weeks from onset whoop

*From
American Journal
of Public Health—
March, 1927*

INFECTIONOUS FEVERS deplete the child's vitality. It is an exhaustion comparable to fasting. Convalescent children show a low metabolism for several weeks following the disappearance of the fever. The low metabolism is the consequence of generalized cellular damages.

When the infection clears, activity is curbed and rest periods instituted. The child is ready to gain. The problem is to bring about sufficient intake of food. The initial diet consists of small portions of each food prescribed and the amounts are gradually increased.

The high caloric diet is indispensable. It is made possible by reinforcing foods and fluids with Karo. Every article of the diet can be enriched with calories. A tablespoon of Karo provides 60 calories. Karo is relished added to milk, fruit and fruit juices, vegetables and vegetable waters, cereals, breads and desserts. Karo consists of dextrans, maltose and dextrose (with a small percentage of sucrose added for flavor), not readily fermentable, rapidly absorbed and effectively utilized.



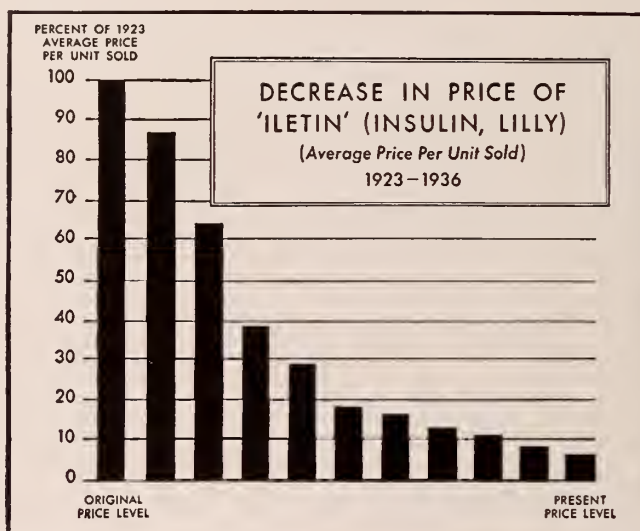
Corn Products Consulting Service for Physicians is available for further clinical information regarding Karo. Please Address: Corn Products Sales Company, Dept SJ12, 17 Battery Place, New York City.



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MEDICAL SOCIETY OF DELAWARE PROCEEDINGS: 147th ANNUAL SESSION

October 13, 1936

TUESDAY MORNING SESSION

The One Hundred and Forty-Seventh Annual Session of the Medical Society of Delaware convened at ten o'clock in the Hotel Belhaven, Rehoboth, Dr. Joseph B. Waples, President of the Society, presiding.

PRESIDENT WAPLES: The meeting will come to order, please. I wish to introduce Reverend Warren.

REVEREND WARREN: I wish to make a statement before I offer the invocation, a very brief statement. While I have spent most of my active life in the state of New York, and in New York City, thirty years of my fifty-one years in the ministry being spent on the banks of the Hudson and in the great city at the mouth of the Hudson, yet I am a blue hen's chicken. I was born near Bower's Beach, back in 1859. My father was George Rodney Warren. Well, that would be of little concern to you, except that it leads up to this statement, that my great-grandfather was Dr. Nathaniel Lough, who was a member of the first Medical Society of Delaware and one of its organizers.

He wrote a history of his life, with very many valuable hints as to the medical procedure in those days, which would be quite amusing, I think, to some of you gentlemen, with your more advanced knowledge of this day. Then, on my mother's side, my grandfather was Dr. Lawes, and he was quite a noted physician in this state, so that on both sides I am a product of the medical fraternity, and therefore I feel that I have some right to be present this morning. Now we will have the invocation.

Oh, Lord, our Heavenly Father, we do thank Thee this day that we are permitted here to assemble to take wise counsel, to deliberate, and to think those things that make for human health and human betterment. After all, health must be the basis of all happiness, as well as of all efficiency in every line. Sick men are useless men, and therefore we ask Thee that all science and thought and knowledge and inspired methods of procedure from Thee may be given to these doctors so that their touch may be firm and gentle, their skill may be efficacious and that they may lead men into larger areas of usefulness and be able to point the way to better living along hygienic and scientific, yea, and ethical lines, so that people may be better because they do better and think better, eat better and drink better, and do the things that make for health; restraining themselves, denying themselves, and yet nourishing themselves along all good lines, that Thy name may be glorified and that Thy cause may be advanced.

Bless us today, guide us through life by Thy counsel and at last save us in Thy heavenly kingdom; we ask it all through reaches of grace in Christ Jesus, Amen.

PRESIDENT WAPLES: Gentlemen, at this time it gives me great pleasure to present the four-times mayor of Rehoboth, Frederick Ross.

MAYOR ROSS: Mr. President, honored guests, members of the Medical Society of Delaware: It gives me a great deal of pleasure as Mayor of Rehoboth to extend to you a very hearty welcome, and trust your stay with us will be a pleasant one. I hope you will find time to circulate and enjoy the natural advantages of Rehoboth, and that you will get such an impression that you will want to come back every year.

No profession can, or does, command greater respect than that which you represent. When a person is sick, the first thing he thinks about is the doctor. Why? Because we have implicit faith that he, or she, can furnish the necessary relief.

As physicians you may be interested to know that we have just completed a \$300,000 up-to-date sanitary sewer system and treatment plant; this in addition to our pines places Rehoboth second to none as a health resort in this country. So if any of you have any convalescents, don't hesitate to send them to Rehoboth, the only place in Delaware where they can eventually be cured.

PRESIDENT WAPLES: When I arrived home after our medical meeting last year, and some of my friends found that I had been elected President, knowing that I wasn't a public speaker and couldn't speak publicly, or read papers publicly, one of them said to me, "Well, what are you going to do? You have to read now. We have often tried to make you read a paper or speak." I said, "That is the sad part of it." "Well," he said, "you needn't worry. All you have to do is write a paper and tell a joke—a good joke—and start off." The other friend laughed. He said, "What are you laughing at?" "He won't have to tell a joke. He'll be a joke enough himself when he starts to read a paper."

Nevertheless, here I am. When I started to write this paper I noticed a history of Delaware—I think it would be much better to call it a synopsis. I think it would be a good plan for a paper to be written about Delaware at least once each decade for the benefit of the new men and also to somewhat refresh our minds.

...President Waples then presented his prepared address, entitled: The History of Medicine in Delaware (Printed in THE JOURNAL, October, 1936).

PRESIDENT WAPLES: We will hear the report of the House of Delegates before going to the next paper.

SECRETARY SPEER: The House of Delegates met at the Belhaven Hotel on Monday evening, October 12, at 8:30 p. m., Dr. Joseph B. Waples,

President, in the Chair. The roll call showed a quorum present, and the reports of the officers were read and on motion were approved as read. The Nominating Committee, composed of Doctors Vallett, McDaniel and Barnes, was appointed by the Chair. The reading of the minutes of the last regular session was, on motion, dispensed with, as they had already been printed in THE JOURNAL. The minutes of the special meeting of the House of Delegates, held on December 30, 1935, were read and approved.

After the reading of the Treasurer's report the Chair appointed Doctors Bird, Butler, and Parsons as an auditing committee to audit the Treasurer's books.

The Publication Committee in its report showed a very nice gain over last year. Our Journal is small, but under the efficient management of the business manager we certainly have something that I think is a little better than a lot of the other medical society journals have. I can say that because when Dr. Bird and myself go out to Chicago every November we talk to the men out there; they have a lot more difficulty, apparently, in making expenses than we do.

The report of the Committee on Medical Education was approved as a whole and then the recommendations were taken up separately.

The recommendations of the American Medical Association House of Delegates concerning the residence of those who should be eligible to take the examination before the different state boards was approved. The recommendation of holding the examinations in this state every two years was not approved.

After the reading of the report by the Necrology Committee, the House of Delegates rose in a body and stood with bowed heads for one minute in memory of those who had died during the year.

The report of the Committee on Syphilis was discussed at length and brought out especially the practicing of medicine by corporations, and it was the feeling of the House of Delegates that this was to be condemned severely by all of us at all times. Instances were brought up where it was absolutely to the detriment of the patient for this condition to go on.

In the report of the Committee on Tuberculosis, after the report had been accepted as a whole, the recommendation that the Legislature be asked for more money to further the work of the sanatorium at Faulkland was approved separately.

The recommendations of the Committee on Criminologic Institutes were approved as a whole.

There was no unfinished business. The invitation of the Southern Medical Association to this Society to attend their convention in Baltimore, November 17th to 20th, was read.

The report of the Committee on Scientific Work was approved. Wilmington was selected as the place for the meeting next year, 1937. The Auditing Committee then reported that they had found the Treasurer's books to be correct.

The Nominating Committee then submitted the following report (See Transactions, House of Delegates, in this issue). On motion, the report of the Nominating Committee was accepted; on motion it was voted upon, and the Secretary cast a ballot for those nominated.

Under New Business, Dr. McDaniel brought up the fact that our Medical Practice Act needs revamping and should be brought, in many cases, up to date, and a motion was made and carried that a committee be appointed by the President to formulate these changes, and then those changes be brought before the House at a special meeting for their approval. That committee consists of

Dr. W. E. Bird, Dr. J. S. McDaniel and Dr. James Beebe. That completed the business of the House of Delegates. The motion that all of the expenses incident to this convention be paid was carried, and on motion the House adjourned.

DR. MAYERBURG: I move the report of the House of Delegates be accepted.

...The motion was duly seconded, put to a vote and carried...

PRESIDENT WAPLES: The first paper will be by Dr. William F. Bonner, of Wilmington.

...Dr. Bonner read his prepared paper entitled: "Bronchiectasis" which was discussed by Dr. E. R. Mayerberg.

PRESIDENT WAPLES: The next paper is by Dr. E. L. Stambaugh, of Lewes, on "Acute Appendicitis."

...Dr. Stambaugh presented his prepared paper, illustrated with slides, which was discussed by Drs. W. F. Bonner, Ira Burns, R. W. Tomlinson and E. R. Miller.

DR. MORRIS (State Board of Health): I would just like to say that the State Board of Health has a number of sets of the DeLee obstetrical films here. They are set up and ready for exhibit in room 29, which is on the second floor at the west end of the corridor. We would be very glad to have any of you who care to do so step in there any time during the day or evening and view any of these films that you care to see. Thank you.

SECRETARY SPEER: Dr. Morris, you said any time of the day?

DR. MORRIS: Any time during the day.

SECRETARY SPEER: We request you not to show them during the session.

DR. MORRIS: I would much rather attend the sessions myself.

SECRETARY SPEER: Gentlemen, will those who have not already done so please register at the desk?

PRESIDENT WAPLES: If there is no further discussion, gentlemen, we will adjourn. We purposefully made our program short for this morning, having had in mind the fact that the meeting was to be held at Rehoboth. We hoped we would have good weather, and we have been fortunate. We knew that many of you would like to walk out around the beach front and enjoy a little bit of our ocean. But I do want to impress upon you to try to be back, every one of you, by 12:30 so that we can have our lunch and start our program promptly this afternoon. I sincerely hope that you will try to be on time.

...The meeting thereupon adjourned at 11:30 o'clock...

October 13, 1936

TUESDAY AFTERNOON SESSION

The meeting convened at 2:40 o'clock, President Waples presiding.

PRESIDENT WAPLES: The meeting will please come to order.

Before we start our regular program this afternoon, Dr. James Beebe has a case that he wishes to present so I will call on him now.

DR. JAMES BEEBE: Mr. President and Gentlemen: I thought you might be interested in seeing this man who walked into my office a couple of days ago. It is something you don't often see in this day and age—advanced epithelioma that has never had treatment. This man has a very evident lesion here on his ear. It started about a year ago. It was a very small scab and advanced to the present state. During the past year he has had no treatment of any kind. He came over to

see what could be done about it. I thought possibly you might like to look at it. Here he is.

SECRETARY SPEER: Dr. Waples has been called to the telephone.

Does anyone want to discuss this case?

DR. BEEBE: This man just walked into my office. I thought possibly you might want to see it. Those things are slow, and if anybody has any suggestions as to treatment—Dr. Burns said he had a case, I believe.

DR. BURNS: We had two cases. One was somewhat more ulcerated than this case, and I took it off flush with the skull, by electro-coagulation. That was done approximately four years ago. The man was in my office the other day; he had wonderfully good results.

We also had an old fellow in the Welfare Home in Wilmington whom we treated with radium, and then Dr. R. A. Lynch took off his ear. The last time I saw him, some weeks ago, he had had very good results.

PRESIDENT WAPLES: Is there any other question or discussion on this case? If not we will proceed with our program, as we are a little behind.

I want to introduce Dr. Arthur C. Jost, of the State Board of Health.

...Dr. Jost then read his prepared paper, entitled: "Diphtheria Immunization in Children," which was discussed by Dr. L. B. Flinn.

PRESIDENT WAPLES: On last Thursday I was in Washington and called up the next named speaker on our program. Very much to my disappointment and surprise he had made a mistake in his date, and insisted that the letter that he had received said October 12. He said he had made arrangements, as this letter will explain, for engagements today. I received this letter from him this morning. (Read letter from Dr. Burke.)

I took the matter up with Dr. Speer from Washington. I told him Dr. Burke was in, that his secretary told me she was positive she hadn't made the mistake, and that Dr. Burke probably had. Last night Dr. Speer showed me the letter he had written Dr. Burke. I am explaining this so it won't be blamed on Dr. Speer. Dr. Speer wrote him, asking him to fill in the subject that he would talk on, and clearly stated "October 12."

Dr. Burke seemed very sorry and very disappointed, as he had never been down to this resort. As it is becoming very popular among the Washington people, he was very anxious to come and he seemed to regret it very much. So we will have to skip the next number, but I am going to try to get his paper and have it published in THE JOURNAL, if it is possible.

The next speaker is one of the professors of medicine of the University of Pennsylvania, Dr. T. Grier Miller, whose subject is, "Diagnosis and Management of Gall Bladder Disease."

...Dr. Miller presented his prepared paper, with lantern slides, which was discussed by Dr. R. W. Tomlinson.

PRESIDENT WAPLES: Is there any further discussion?

The next man needs no introduction, as he is one of our own men, Dr. B. M. Allen, of Wilmington.

...Dr. Allen presented his prepared paper, entitled: "The Results of Gall Bladder Examinations by Varying X-ray Technique," which was discussed by Dr. Ira Burns.

PRESIDENT WAPLES: Is there any other discussion? Dr. Allen, do you have anything else to add?

The next paper will be presented by Dr. Thaddeus L. Montgomery, of Philadelphia, on "Obstetric Anesthesia and Analgesia; Its Effect Upon the Third Stage of Labor."

...Dr. Montgomery presented his prepared paper...

PRESIDENT WAPLES: Dr. Montgomery, we certainly appreciate your coming to us with that wonderful paper. I want to thank you, sir.

Is there any discussion?

...The paper was then discussed by Drs. W. E. Bird, Carl H. Davis, A. C. Jost, J. B. Waples, and A. A. Hayden.

PRESIDENT WAPLES: Is there any further discussion? If not, gentlemen, we stand adjourned until eight o'clock this evening.

...The meeting thereupon adjourned at 5 o'clock.

October 13, 1936

TUESDAY EVENING SESSION

The Public Meeting convened at 8:30 o'clock at the Blue Hen Theatre, President Waples presiding.

PRESIDENT WAPLES: Ladies and Gentlemen: This meeting tonight was arranged for the purpose of acquainting the people with the activities of the American Medical Association and for an explanation of those activities. We are very fortunate in having as our lecturer tonight for that purpose Dr. Hayden, who is Secretary to the Board of Trustees of the American Medical Association in Chicago. Dr. Hayden!

...Dr. Hayden then gave a most interesting and instructive lecture, speaking extemporaneously, which created a lasting impression.

PRESIDENT WAPLES: I know I express the thoughts of all when I say we greatly appreciated your talking and your pictures. Thank you very much, sir. We hope we may all hear you again.

Our very efficient Secretary consented to give the next paper. It is one of the greatest interest to the laity and also to doctors today—"Information to the Laity on Cancer." Doctor William H. Speer!

...Doctor Speer presented his prepared paper at the conclusion of which he made the following remarks:

SECRETARY SPEER: The field, of course, is so large in cancer that you could go on and talk, and regardless of how long you talked you could not cover it by any means.

As I said in the beginning, the purpose of these short talks is to acquaint the public with the absolutely known facts concerning a thing, with the hope that after a period of time we will have attained results as good as those that have been attained by the Anti-Tuberculosis Society.

PRESIDENT WAPLES: Dr. Speer, your paper has been most interesting to the medical profession as well as to the laity, and I want to thank you for it. As you go out, there are some pamphlets on a table by the door on this subject. If you care to take one, help yourself.

Tomorrow morning, gentlemen. Don't forget we start at nine-thirty.

...Whereupon the session was adjourned at 10:15 p. m.

October 14, 1936

WEDNESDAY MORNING SESSION

The General Session convened at the Hotel Belhaven at eleven o'clock, President Waples presiding.

PRESIDENT WAPLES: The meeting will come to order, please.

We purposely delayed the opening of the meeting this morning because it is such a beautiful day and also because of the short program. I am very sorry many went home, because I think they are missing something by not hearing these papers.

The first paper is on "Some Recent Advances in Radiotherapy," by Doctor Ira Burns, of Wilmington.

DR. IRA BURNS: The few remarks I make on this subject are not to be construed as the millennium by any means. I am just briefly going over some of the new things that are being done on an old subject.

...Doctor Burns then presented his prepared paper.

PRESIDENT WAPLES: Doctor, I want to thank you for the paper. It was very interesting.

DR. BURNS: I should be glad to have any comments on my paper. I am not at all sensitive and I certainly would like awfully well to hear opinions.

PRESIDENT WAPLES: Is there any discussion?

The next paper is on "Diagnostic Features of Some Gastro-Intestinal Conditions," by Doctor Laurence Rigney, of Wilmington.

...Doctor Rigney then presented his prepared paper, which was discussed by Drs. B. S. Vallett and R. W. Tomlinson.

...Brief clinical reports of cases were then made as follows: Actinomycosis of the Chest Wall, Dr. W. H. Speer; Probable Blastomycosis of the Scalp, Dr. W. H. Speer; Hookworm, Dr. J. B. Waples; and Appendicitis in a Child Aged 18 Months, Dr. R. C. Beebe.

PRESIDENT WAPLES: Are there other reports? If not, we will proceed with the election. I would now like to call for nominations for President of the Society for 1937.

DR. TOMLINSON: Today with the paucity of members present which is depicted here visually—why, I don't know—I want to accord to myself the honor of placing in nomination Dr. Charles White, a man who has endeared himself to the profession of this state, and who is entitled to any honor which the medical profession can accord to him. I take great pleasure in presenting the name of Dr. Charles P. White, of Wilmington.

PRESIDENT WAPLES: Are there other nominations?

DR. MILLER: I move the nominations be closed. ...The motion was duly seconded, put to a vote, and carried...

DR. BIRD: I move the Secretary cast the ballot for Dr. White as President.

...The motion was duly seconded, put to a vote, and carried...

SECRETARY SPEER: The ballot has been cast for Dr. White, of Wilmington, as President of the Society for 1937.

PRESIDENT WAPLES: Dr. White, will you please come up here, sir? May I offer you congratulations? (Applause)

PRESIDENT-ELECT WHITE: Mr. President and Members of the Delaware State Medical Society: To be elected President of this Society is a high honor, and I am appreciative of it. Many able men have filled the office of President of this Society in the 150 years of its existence, it being truly an ancient and honorable society. And to have one's name added to that list is very gratifying.

So far as I know there is nothing confronting this Society for the coming year that could be called difficult, but in case anything does come up that is out of the ordinary, we officers will apply to you for whatever help we may need.

I understand that some sort of speech is expected from every new President, but it is difficult to make up a speech on a moment's notice, and I should perhaps follow the advice of ex-President Coolidge who once said, "If you don't have anything to say, don't say it."

If that was a good enough policy for President Coolidge to follow, it certainly should be good enough for me.

Thank you once more, my friends.

PRESIDENT WAPLES: This completes our convention and, gentlemen, I want to thank you all for the support that you have given me during this past year and for the honor that you bestowed upon me.

There was only one thing that had me frightened to death and that was this feeble attempt I made to preside over the meetings, and the paper I had to present. I found that that wasn't so hard, because we got here early and got it over with before anybody came in.

I want to tell you again how much I do appreciate this honor that you conferred upon me, and I am mighty glad to see that we have a very efficient new President for the year 1937.

I declare the convention closed.

...Whereupon the convention was adjourned at 12:30 o'clock.

MEDICAL SOCIETY OF DELAWARE TRANSACTIONS: HOUSE OF DELEGATES, 1935

October 12, 1936

The meeting of the House of Delegates of the Medical Society of Delaware convened at eight o'clock at the Hotel Belhaven, Rehoboth, Delaware, Monday evening, October 12, 1936, Joseph B. Waples, President of the Society, presiding.

PRESIDENT WAPLES: Will the meeting come to order please? The first order of business is the roll call.

The Secretary called the roll, and the following delegates and alternates were seated:

J. B. Waples, President; M. I. Samuel, Vice-President; W. H. Speer, Secretary; A. L. Heck, Treasurer; Bruce Barnes, Councilor; Delegates, New Castle County, W. E. Bird, J. W. Butler, D. T. Davidson, J. H. Mullin, Roger Murray, R. W. Tomlinson; Alternates, New Castle County, B. M. Allen, Ira Burns, L. D. Phillips, B. S. Vallett, C. E. Wagner; Delegates, Kent County, W. T. Chipman, J. S. McDaniel, C. J. Prickett; Delegates, Sussex County, G. Metzler, Jr., G. M. Van Valkenburgh.

SECRETARY SPEER: Mr. President, there are sufficient members present. Ten constitute a quorum; therefore, a quorum is present.

PRESIDENT WAPLES: All right; the reading of the minutes is next in order.

SECRETARY SPEER: Gentlemen, you have all seen the minutes of the last session printed in THE JOURNAL. If it is your pleasure I will read them; if not, I am sure the Chair will entertain a motion to dispense with the reading of the minutes.

DR. M. I. SAMUEL: I move the reading of the minutes be dispensed with.

DR. EARL BELL: I second the motion.

PRESIDENT WAPLES (after putting the motion to a vote): It is so ordered. We come to the appointment of a nominating committee. I will appoint Doctors Brice Vallett, Joseph McDaniel and Bruce Barnes.

SECRETARY SPEER: Mr. President, if I may say a word at this time on the appointments: If you will take one of your programs you will note that

you nominate not the president but the vice-president, the second vice-president. The vice-president at this time will come from Sussex; the second vice-president from Kent. You nominate the secretary and the treasurer, and one councilor from Kent. Dr. Barnes of Sussex and Dr. Niles of New Castle hold over, of course, and the councilor this year comes from Kent.

You nominate a delegate to the A. M. A. and an alternate, and you nominate the standing committees. For your information, the incoming secretary is a member of the Scientific Committee, so that leaves two to be nominated. The incoming president and the incoming secretary are members of the Committee on Public Policy and Legislation. So that leaves three nominations, one from each county, for the Public Policy and Legislation Committee. The incoming secretary is always a member of the Committee on Publication, so that you nominate the other two only. For the Committee on Medical Education you nominate three; for the Committee on Hospitals you nominate three; for the Committee on Necrology you nominate three. The special committees are all appointed by the incoming president.

Report of the President

PRESIDENT WAPLES: The reports of the officers: The President, I am sorry to say, has a very short report to make. Each time he has attempted to visit Wilmington he has been very much disappointed, as he couldn't make it. I have visited Kent once. All I can say is that from the reports I hear from Wilmington, and knowing the other societies, that they are very active and going on very nicely, and the State Society seems to be in good shape. I will call now for the Secretary's report.

Report of the Secretary

The Secretary's office has been very busy answering questionnaires and giving information to State and County Societies. The information usually requested has been in the matter of dues—the amount; how much of the amount was appropriated for medical defense; how much, if any, for old age benefits; and if we had any doctors on relief?

As last year, the New York State Society maintained a publicity bureau and the Secretary received copies twice a month of the material which was printed in the New York papers.

The Library acknowledged the copy of the minutes which we gave to them for safe-keeping.

Other than this there was no important event that needed attention, and as this was the off year for the State Legislature, things were very quiet.

Your Secretary, along with the Editor of THE JOURNAL, attended the meeting of the Editors and Secretaries of the several states at Chicago in November of last year and gained quite a bit from these meetings.

With regards to the report of the Committee on Criminological Institutes of last year, which had a suggestion that a committee from this Society and a committee of the Bar Association meet to discuss the question of crime, I spoke to several members of the Bar Association concerning this question, but was unable to get any apparent expression of their favoring the proposition. I did not write an official communication to the Bar Association.

The Council has had three meetings, at which the Secretary was present.

This completes the business of the Secretary's office as of this date.

Respectfully submitted,

W. H. SPEER.

PRESIDENT WAPLES: You have heard the report. What is your pleasure?

DR. CHIPMAN: I move the report be accepted and filed as read.

(The motion was seconded.)

PRESIDENT WAPLES: All those in favor say "Aye"; opposed. It is so ordered. Now the report of the Treasurer, please.

Report of the Treasurer

SECRETARY SPEER: Mr. Treasurer, before you report, may I present two bills, or would you rather have those later?

TREASURER HECK: I would rather have those later.

The report of the past year is as follows:

GENERAL FUND

October 8, 1935, Balance forwarded... \$ 521.51

Receipts

Dues, New Castle County (145)	\$725.00
Dues, Kent County (34)	170.00
Dues, Sussex County (28)	140.00
Dividends: Bank Stock	84.00
Exhibition Space	50.00
From Banquet (67)	134.00

Total \$1,303.00

Total \$1,824.51

Disbursements

Subscriptions to Journal	\$414.00
Medical Defense Fund	207.00
Annual Session	350.60
Medical Stenography	127.92
Flowers	73.90
Council	11.05
A. M. A. Directory	12.00
Secretary's Expenses	40.00
Printing & Postage	34.00

\$1,270.47

October 12, 1936, balance on hand \$ 554.04

DEFENSE FUND

October 7, 1935, balance on hand \$3,599.25

Receipts

Dues, per capita	\$207.00
Interest on Deposits	122.30

329.30

October 12, 1936, balance on hand \$3,928.55

Respectfully submitted,

A. L. HECK

PRESIDENT WAPLES: You have heard the report. What is the pleasure of the Society?

DR. SAMUEL: I move the report be accepted.

PRESIDENT WAPLES: (Puts motion to vote) (Carried) It is so ordered. It is customary at this point to appoint an Auditing Committee is it not? I will appoint Dr. Parsons, Dr. Bird and Dr. Butler. The next report is that of the Councilors.

Report of the Councilors

SECRETARY SPEER: The Council has had two meetings during the year. The first was held at Bay View, Delaware, on January 23rd. The meeting was called to order by the President, Dr. Waples. Those present were Doctors Waples, Niles and Speer. The first thing discussed was a bill from a law firm for services. It was the feeling of those present that this bill was very greatly in excess of the services rendered, and

the Secretary was directed to communicate with the law firm to see if an adjustment could be made.

The matter of starting clinics in Kent County by the State Board of Health was discussed, and it was decided that the Council meet on February 5th with the Kent County Society to discuss this matter. The resolutions on the former Chief Justice Penniwell were approved. The annual meeting place for 1936 was decided on as Rehoboth. Bills as presented were approved, and the motion carried that all expenses incident to this meeting be ordered paid.

Another meeting of the Council was held on October 12th, 1936, for the purpose of further discussing the legal matters referred to. We can report only that the matters have not yet been completed.

PRESIDENT WAPLES: You have heard the report. What is your pleasure?

DR. ———: I move we accept it.

PRESIDENT WAPLES: (Puts motion to vote; carried.) It is so ordered. The report of the standing committees; the Committee on Scientific Work; Dr. James Beebe.

Report of the Committee on Scientific Work

DR. BEEBE: Mr. President and House of Delegates: This committee had four meetings, and we hope the program meets with your approval.

We requested, through the secretaries of the different county societies, papers from members, and as you see, several of our papers are by Delaware men.

Again the question of a Tuesday night public meeting came up, and it was decided this would be of a great deal of benefit to the people of this community.

Respectfully submitted,

JAMES BEEBE.

PRESIDENT WAPLES: The Secretary has a report of a special meeting of the House of Delegates that we wish to read at this time.

Report of a Special Meeting of the House of Delegates

A special meeting of the House of Delegates of the Medical Society of Delaware was held in the Hotel Du Pont, December 30, 1935, at 4:30 p. m. The following were present: Doctors—

J. D. Niles	W. E. Bird
W. H. Speer	I. L. Chipman
J. P. Wales	J. H. Mullin
L. J. Rigney	Earl Bell
Edgar Miller	R. W. Tomlinson
Ira Burns	J. D. Phillips
J. W. Butler	Brice Vallett
I. M. Flinn	D. T. Davidson
A. J. Strikol	L. W. Anderson
A. L. Heck	C. E. Wagner

I. W. Mayerberg

The President announced that this meeting had been called to discuss a letter which he had received from the Honorable P. W. Green, Attorney-General of the State of Delaware, and a bill from a law firm against the Medical Defense Fund. He also stated that he, personally, had several bills to present.

Mr. Green's letter, which was read, had to do with the irregular practice of medicine by the group known as chiropractors. After a great deal of discussion, Dr. W. E. Bird presented the following resolution:

"Whereas, the Medical Society of Delaware, along with the several other states, and the American Medical Association, are attempting to protect the public health by preventing the healing art from being practiced by those who are not

qualified up to a certain minimum standard; and "Whereas, these irregular practitioners are violating the Medical Practice Act of this state, by attempting to cure disease and conditions by various means, and

"Whereas, the Delaware Legislature of 1935 enacted a bill relating to personal services, that might be used to evade the Medical Practice Act, now, therefore, be it

"Resolved: That this Society request the office of the Attorney-General to investigate these conditions and take such action as his office deems advisable; and that this Society will assist in every possible manner."

It was regularly moved and seconded that this resolution be adopted, and it was carried unanimously. It was then regularly moved, seconded, and carried, that the Legislative Committee of this Society act as soon as possible on this matter.

It was then regularly moved, seconded, and carried, that expenses up to \$50.00 be paid by this Society, and any excess beyond this amount be brought before the Council for their action.

A letter from the New Jersey State Medical Society was then read and it contained a resolution that our Society support the New Jersey Society in asking for a special meeting of the House of Delegates of the American Medical Association, to be held in Chicago in February, 1936, the subject to be discussed being medical economics, and nothing else. It was regularly moved and seconded, also carried, that we comply with this request.

The Secretary then presented a bill which he had received from a law firm for services rendered. It was regularly moved, seconded, and carried that this matter be referred to the Council.

A motion was then made, seconded, and carried that the Secretary draw up resolutions on the death of former Chief Justice Penniwell, and that a copy be sent to his family, as follows:

RESOLUTION:

"Whereas, God in His infinite wisdom has removed former Chief Justice James Penniwell from our midst, and

"Whereas, the people of this state have lost one of their most distinguished citizens by his death, and

"Whereas, The Medical Society of the State of Delaware especially mourns its loss because of his efforts in their behalf and the behalf of the people in this state, while a member of this state's Medical Council from 1909 to 1933;

"Now, therefore, be it Resolved: That this Medical Society of the State of Delaware publicly express our deep feeling of regret at his passing, and that this resolution be placed upon the minutes of this Society, and a copy sent to his family."

It was then regularly moved, seconded, and carried that the expenses of this meeting be paid by the Treasurer.

Upon motion, the meeting adjourned.

W. H. SPEER,

Secretary.

PRESIDENT WAPLES: The Committee on Public Policy and Legislation has asked that their report be deferred for a few minutes. I call for the report of the Committee on Publication, Dr. Bird.

Report of the Committee on Publication

As heretofore, we transmit herewith the report of the Publication Committee in two sections, (1) that of the Editor, and (2) that of the Business Manager.

REPORT OF THE EDITOR

We are nearing the close of Volume VIII of the New Series, and despite the stress of the times, we have maintained the usual standards of THE JOURNAL in size and character. We have published all the transactions and papers of this Society, as well as some of those read before county societies, and a few that were contributed. We restate our appeal for more papers of this latter class.

Your committee has functioned harmoniously, and its business has been transacted promptly. We wish to take this occasion to thank our printers, the Star Publishing Company, for their unflinching courtesy and efficiency.

Your Editor wishes to thank the members for their assistance and cooperation, without which a creditable journal would not be possible. We are glad to state that the praise has far outweighed the criticism, and we are still winning the approval of our confreres in other states and at the national headquarters.

Respectfully submitted,

W. EDWIN BIRD

REPORT OF THE BUSINESS MANAGER

of the Delaware State Medical Journal
(October 7, 1935, to October 12, 1936)

Savings Account, October 7, 1935, Wilmington Trust Co.	\$4,362.36
Checking Account, October 7, 1935, Wilmington Trust Co.	294.43
Total	\$4,656.79

Receipts

Advertisements	\$2,572.72
Single copy sales	1.83
Rebate on advertisements from A. M. A.	115.86
Subscriptions, Med. Soc. mem.	414.00
Subscriptions, others	41.00
Total Receipts	\$3,145.41

Disbursements

Printing and mailing Journal	\$2,107.76
Miscellaneous postage	15.00
Misc. printing	88.00
Salary of editor	460.00
Salary of stenographer	104.00
Notary fees	1.50
Binding Journals	9.00
Copyrighting Journals	18.00
Misc. office supplies	3.80
Memberships, Editors Assn.	21.00

Total Disbursements ... \$2,828.06

Operating Balance \$ 317.35
Int. on Sav. Acct. 165.19

482.54

Total, October 12, 1936	\$5,139.33
Svgs. Acct. Wil. Trust Co., Oct. 12, 1936	4,677.55
Ckg. Acct., Wil. Trust Co., Oct. 12, 1936	461.78

Total Balance \$5,139.33
Still due from advertisements, approximately \$ 137.00

SUMMARY for 7 years, 10 mos.
(Jan., 1929, to Oct. 12, 1936)

Receipts

Advertisements	\$17,806.22
Subscriptions, Med. Soc. Mem.	2,858.00
Subscriptions, others	271.00
Rebates from A. M. A.	772.56
Rebates on cuts	78.53
Single copy sales	12.31
Refund under NRA	2.34

\$21,800.96

Int. on Savgs. Acct. 660.38

\$22,461.34

Disbursements

Printing and mailing Journal	\$14,766.25
Miscellaneous postage	78.80
Stationery	319.13
Notary fees	8.25
Stenographer's services	540.86
Memberships, Editors Assn.	141.00
Membership N. R. A.	10.00
Reprints	20.30
Salary of Editor	760.00
Binding Journals	45.00
Tax on checks	1.90
Convention expenses	198.66
Editorial expenses	37.00
Repairing cuts	6.12
Cuts	144.02
Editors' Convention	134.92
Copyrighting Journal	18.00
Miscellaneous printing	88.00
Miscellaneous office supplies ..	3.80

\$17,322.01

\$5,139.33

From the above financial report of the Business Manager of the Delaware State Medical Journal you can readily see that even during the depression years we have not been "in the red." Our operating balance shows that we made a clear profit of \$317.35 during the year, in addition to interest on savings account of \$165.19, a total of \$482.54. We are also proud of the fact that during the seven years of our management of the business affairs of THE JOURNAL the receipts amounted to \$22,461.34, and the disbursements \$17,322.01, a balance of \$5,139.33.

Respectfully submitted,

M. A. TARUMIANZ.

PRESIDENT WAPLES: What is the pleasure of the Society?

DR. ———: I move the report be accepted.
(The motion carried.)

PRESIDENT WAPLES: I will call for the report of the Committee on Medical Education.

Report of the Committee on Medical Education

SECRETARY SPEER: Dr. Mayerberg, being unable to be present so far, said he would be down a little later, and asked me to read this report, as follows:

Mr. President and Members of the House of Delegates of the Medical Society of Delaware: Two national organizations hold meetings each year to consider the problem of medical education. The Association of American Medical Colleges is concerned primarily with the pedagogical phase of medical education. Every medical school is confronted with the problem of selecting from the

huge lists of applicants, those best fitted to enter the profession of medicine. It is much more difficult to enter a medical school now than it was twenty or thirty years ago. This is true not only because the number of applicants has increased several hundred per cent during this time, but also because the medical course is now much more difficult and the practice of modern medicine is much more exacting, both from a scientific and an economic point of view.

The Deans of the medical schools make every effort to admit only those young men and women who have the mental ability and the moral qualifications to be a credit to the profession after graduation. This task is becoming more and more difficult. Each member of the medical profession can do much to aid his alma mater and the profession of the future by definitely discouraging young men who, he believes, lack the mental and moral requirements for successful practice of medicine, from even applying for admission to any medical school.

The Council on Medical Education and Hospitals of the American Medical Association in its annual meeting deals with the more practical phases of medical education as it affects organized medicine and the profession as a whole. One of the difficult questions that has been discussed repeatedly before both of these national organizations is, "Should the number of medical students be restricted?" At the meeting of the Council on Medical Education and Hospitals this year a very comprehensive report was submitted presenting a very sane discussion of the problem involved and was published in the *Journal of the American Medical Association*. We recommend the reading of this report to everyone interested in medical education and the future of the profession.

The Association of American Medical Colleges reports that there were 24,427 applications for admission to the 1936 freshman class, representing 12,740 applicants and of these 6,900 were accepted and 5,840 rejected. Many of the applicants sent application to several medical colleges hoping that one of them would accept the application. It is estimated that from one to two per cent of those accepted will drop out during the first few weeks of the college course.

A large number, being refused admission to our American schools, have gone abroad, and it is estimated that this year there will be over 1500 students from the United States taking courses in various European medical schools.

In 1933 the Federation of State Medical Boards adopted a resolution to the effect that no student matriculating in a European medical school subsequent to the academic year of 1932-33 will be admitted to any state medical license examination who does not present satisfactory evidence of pre-medical education equivalent to the requirements of the Association of American Medical Colleges and the Council of Medical Education and Hospitals, and graduation from a European medical school after four academic years of attendance, and further submit evidence of having satisfactorily passed the examination to obtain a license to practice medicine in the country in which the medical school from which he is graduated is located. This policy of the Federation has been made effective by individual action on the part of some of the state license bodies and the National Board of Medical Examiners.

Furthermore, the House of Delegates of the American Medical Association adopted the following resolutions at its recent meeting in Kansas City:

"Whereas: through the initiation, support and watchfulness of organized medicine, standards of medical education and medical practice have rapidly and continuously advanced; and

"Whereas: there is a serious danger of this most satisfactory state of progress being undermined, and weakened by the admission to practice of graduates of medical schools of foreign countries; and

"Whereas: there are at the present time more than 1500 American students attending medical schools in foreign countries, many of them not having satisfactory credentials for admission to American medical schools; and

"Whereas: there is in the files of the Council on Medical Education and Hospitals of the American Medical Association and the Federation of State Medical Boards, evidence that many of the foreign medical schools do not consistently maintain and enforce the same high standards as are maintained in the medical schools of the United States;

"Therefore, be it Resolved: that each applicant for medical license in the United States, in order to adjust his inequality and to show a knowledge of acceptable medical practice, should be required before being admitted to a written examination, before a properly constituted examining board, to hold a license to practice in the country of his graduation and a certificate that he had completed a year's work as an interne in a hospital approved for internship training, or should complete the fourth year in an American class "A" medical college; and

"Be it further Resolved: that the House of Delegates of the American Medical Association approved the foregoing and that a copy be sent to the properly constituted officers of each examining board of the United States and to the Federation of the State Medical Boards, with the request that they consider seriously urgent need for the adoption of such rules and such legislation necessary to put the purpose of these resolutions into effect."

Your committee is in full accord with the foregoing resolutions and recommendations of the House of Delegates of the American Medical Association, and if steps have not already been taken by the Medical Council of Delaware to conform to them in every detail, we recommend that they do so immediately.

One examination was held by our Medical Examining Board last year and one this year. There were seventy-five applicants but only twenty took the examination and nineteen passed. Eight were admitted by reciprocity.

Graduates of recognized colleges are well prepared to take medical state board examinations. Most of them are so well equipped that they can pass almost any examination the average examiner is able to present. It must be admitted that each year finds the medical colleges turning out better products.

It should be the duty of our Medical Council not only to supervise the state board examination but to scrutinize each candidate carefully for other just as important qualifications as the didactic one. Personal appearance, personality, moral fitness, and sympathetic understanding are most necessary attributes.

All of us welcome the right kind of men and women into our state and into our profession, and it is up to the Medical Council to see that only the right kind are admitted.

The fee for taking the examination in our state is probably the lowest of any of the other states. The Medical Council funds are hardly enough to permit the Council to function properly. We

recommend that the fee be increased to twenty-five dollars, and the fee for reciprocity be made two hundred dollars. We also recommend that the examinations be held alternate years instead of every year.

Your committee feels that this particular committee should have a greater function than the mere presentation of an annual report. It should act as a central committee to which the component county societies may turn when they are in need of speakers. It should also encourage more frequent scientific meetings, each society inviting the other members to its meetings; or better still, this committee might arrange at least two scientific one-day or one-evening meetings for the State Society and they could be held in the counties in which the state meeting is not being held that year. That would give us three scientific meetings a year and do a tremendous amount of good in helping the members to keep pace with the progress of medicine.

We recommend to the membership visits to the larger medical centers and medical meetings as often as possible. We also recommend the reading of as many medical journals as possible. If you cannot afford to subscribe to as many journals as you would like to read you will find a hundred or more at your disposal in the Delaware Academy of Medicine in Wilmington. Arrangements can be made for borrowing these journals and having them mailed to you at regular intervals if you so desire.

We must ever be watchful to keep up the quality of medical practice in our great state.

Respectfully submitted,
E. R. MAYERBERG
Chairman

PRESIDENT WAPLES: You have heard the report. What is your pleasure?

DR. ———: I move it be accepted and filed. (The motion carried.)

DR. BIRD: I understand that in accepting this report you are carrying with it the recommendations.

PRESIDENT WAPLES: You have heard the report in regard to the recommendation by the A. M. A. What is your pleasure?

DR. BIRD: What is the summary of that A. M. A. request?

SECRETARY SPEER: The resolution, Dr. Bird, reads "Resolved: that the House of Delegates of the American Medical Association approved the foregoing and that a copy be sent to the properly constituted officers of each examining board of the United States and to the Federation of the State Medical Board, with the request that they consider seriously urgent need for the adoption of such rules and such legislation necessary to put the purpose of these resolutions into effect."

DR. BIRD: I move we adopt this report in sections, Mr. Chairman, so that if there be any question of cutting out one resolution or one recommendation, it is understood by the gentlemen voting that that is what they are doing. I move this first recommendation be adopted.

DR. VAN VALKENBURGH: I second the motion. (Motion carried.)

SECRETARY SPEER: The committee recommends that the fee be increased to twenty-five dollars for each applicant and the fee for reciprocity be made two hundred dollars.

DR. ———: What are the present fees?

SECRETARY SPEER: Ten and fifty. These are recommendations to the Medical Examining Board.

DR. ———: By whom?

SECRETARY SPEER: By the Committee on Medical Education.

DR. WM. MARSHALL: Won't that have to go through the Committee on Public Policy and Legislation, that recommendation from the Committee on Medical Education? To make those changes, it is going to require changes in the state law, and that is why we tried to ask to postpone the report of this Committee of Public Policy and Legislation until after the report of the Committee on Medical Education, just to take up those particular questions.

SECRETARY SPEER: You see, Dr. Marshall, this recommendation, if approved by the House of Delegates, will go to your committee; then it is up to your committee to take it up with Public Policy and Legislation. They are recommending to your committee.

DR. J. H. MULLIN: I think it is a mighty good thing, but you would have to change your By-Laws.

PRESIDENT WAPLES: This is only a recommendation from the House of Delegates, as I understand it.

PRESIDENT WAPLES: You have heard the recommendation of the Committee on Medical Education.

DR. BIRD: I move it be adopted. (Motion carried.)

SECRETARY SPEER: Now, the next recommendation is that the examinations be held on alternate years, instead of every year.

DR. ROGER MURRAY: I presume that is to cut down the number of applicants. If so, it seems a very unfair way to do it. I am heartily in favor of raising our requirements, but requiring somebody to wait two years for an examination doesn't seem to me to be fair.

PRESIDENT WAPLES: Any other discussion?

DR. BIRD: Some years ago when this thing was first talked of, somebody in a Philadelphia newspaper wrote a whole page in the Sunday section about the Chinese Wall we are trying to create down here: "Delaware for Delawareans only," and so on. Some of you perhaps saw that, the same as I. That thing went on the AP wires and probably went all over the United States. I don't believe the publicity did the Medical Society of Delaware any good, especially in view of the fact that it never got anywhere so far as the law was concerned. I agree with Dr. Murray. I don't think it is expedient to cut down the inflow of new practitioners here by cutting out any one from examination. At least one examination a year should be held. Raise the standards, yes, and in addition to the standards you can raise the calibre of the examination; you can make it a stiff examination and still be perfectly fair, but I don't believe it is the wise or expedient thing to have no examination one year.

My boy doesn't want to study medicine. He has seen the trials his father has had and he is through before he starts, but let's suppose he did want to study medicine, for he may change his mind. He graduates in 1942, let us say, and too late for the 1942 examination; there is none in 1943. I am perfectly willing to assert that I would feel very much put out if he had to wait until 1944 to take the examination to practice in the same state with his father.

PRESIDENT WAPLES: Any more discussion?

DR. BELL: What are the laws in regard to this in other states? Does anyone know?

PRESIDENT WAPLES: To be frank, I can't tell you.

DR. MULLIN: We used to have the examination twice a year. I think Dr. William Marshall can tell us more about that than anybody; but I don't

think it is quite fair. I don't know what Dr. Marshall thinks; he is on the Board.

DR. MARSHALL: Mr. President, I don't feel that is a fair thing, either. The laws would necessarily have to be changed in that effect, too. I took the A. M. A. Directory not very long ago—a new one had just come out—and I tried to figure the numbers of physicians that were practicing in Delaware at that particular time, and I intended to bring those figures down with me, but roughly, out of the 310 physicians who are registered in the Directory from Delaware, there are only about 240—some, I think 246, who are in the active practice as relates to looking after families, hospital work, etc. The other ones were internes in hospitals, or retired, four or five of them have died in the last year, and there are others who are connected with manufacturing or chemical concerns of one kind or another, or are practicing insurance work alone. Now, that takes them out of the regular field of the practice of medicine, so when we put 310 into the number of people in the state, 230,000, I think it amounts to between 700 and 800. The number (28) that we added through our examining board this year still brings it down just a little bit lower, when you divide that number 28 plus 310. But if you subtract 64—I think it is 60—some that were engaged in other kinds of work or who have passed on, or who were not legally licensed to practice medicine in the state, that brought it down to about 246, and add 28 more to that, and that brought down the number that each physician would look after, probably close to 800.

So I don't think we did so very bad, when you take into consideration only one examination this year; 28 or 29, I think it was, were up for examination, and eight of these for transfer, through reciprocity. If you divide that in two that would have made about the same number as we had before. So I don't think we added so many extra physicians to the numbers that we already had the way it was. It looked so because it was all in one lump number. But I don't think we are doing right if we take the privilege of those who wish to practice medicine away from them for a year, and have them come before us every two years; I think every year is all right.

PRESIDENT WAPLES: Thank you, doctor.

DR. MCDANIEL: I hate to take up your time on the discussion of this, but I feel that as a secretary of the Council, and a member of the Medical Examining Board, I believe I can enlighten you on some of these arguments, because I have the bulk of the work to do and I also know the feeling of the Council about this. Now, I don't believe that anybody can accuse the Medical Council or the Board of trying to keep doctors out of the state of Delaware. I received last year practically 75 applications for examinations and endorsements; we were able in our meetings of the Board to cut those down where we had 20 to take the examination and we had 10, including those of the National Board, for endorsement. I will say this, that of the 20 men that took that examination there has never been before the Board a better class of men than took those examinations, and as much as we would like to have cut that number down, we couldn't do it, because they were high type and high class men; they all passed the examination.

Now, the Medical Council has passed these resolutions. I just came in here a while ago when we were talking about foreign graduates, and we passed a resolution only a short time ago that a man must be first an American citizen, naturalized; he must spend one year in an accredited American college; he must spend one year in an

accredited hospital as an interne, and he must spend one year as a citizen of Delaware before he can receive a license. That certainly cuts out the foreign graduates. That is all passed by the Medical Council. Another thing we passed was that the licentiate of National Board is allowed to receive a license without any examination. But we have also passed, at just the last meeting, that even a licentiate of the National Board, or diplomate as they call him, must spend two years in practice before he can receive a license, the same as any other man applying for endorsement. A man cannot come into the state unless he has spent two years in the state from which he applies; that is another rule. We have also increased the passing percentage up to 75; a man cannot fall in a subject below 75 in order to receive a license.

It seems to me that that has put the barrier on these members coming in with these applications just as hard as we can. I don't approve of only one examination every other year. We certainly must have at least one examination each year.

I might as well also make this statement, that the budget given to the Medical Council of the state of Delaware is only 600. It isn't enough to take care of things. We don't make anything out of it. I think we get perhaps \$15 or \$20 a year for each member out of it. If anybody wants my job he can have it, but I don't want it any more unless I get more than I do, because it entails more work than my practice. It is an unthankful job.

We certainly ought to have \$1,000 as some of the others do. I think the pharmaceutical society gets \$1,000; the nurses' association does also. We get \$600, and we have to divide it among a homeopathic, a regular and an osteopathic board. When we get through we have a few dollars left. I give them a check for what we can. The Medical Examining Board meets about three or four times a year. We go over all the examinations and everybody passes on them. It is kept up with in that way.

So while I am talking I would like to ask for a motion that the President appoint a committee of three men to revise the obsolete laws pertaining to medicine in the state, because you can't follow them as they are now.

SECRETARY SPEER: I tried that three years ago, if you remember.

DR. MCDANIEL: It is really necessary to add the various new rules and regulations that the Council has made, and also to revise some others, because you can't follow them at the present time. I would like somebody to make a motion for the President to appoint a committee of three men to revise the statutes.

DR. CHIPMAN: Dr. McDaniel made a statement that the citizens from other states have to be residents of Delaware two years.

PRESIDENT WAPLES: Two years in the state from which he comes.

DR. MURRAY: I move we concur in the recommendation of this committee, that the examination be held every two years, instead of every year.

PRESIDENT WAPLES: You have heard the motion; any second to the motion?

DR. HOCKER: I second the motion.

DR. CHIPMAN: What is the motion?

SECRETARY SPEER: The committee on Medical Education made a recommendation that the examinations be held alternate years, instead of every year. That is what the discussion has been on. Dr. Murray moves that we accept the recommendation of the committee; Dr. Hocker seconded it.

PRESIDENT WAPLES: You heard the motion; all in favor, please say "Aye".

(Cries of "No," "No," "No.")

SECRETARY SPEER: The motion is lost.

PRESIDENT WAPLES: It is suggested that a committee be appointed.

DR. CHIPMAN: Won't that come under new business?

DR. SAMUEL: Mr. President, I move that a committee be appointed on the recommendation of the State Medical Examiners, as requested by Dr. McDaniel, to revise the law.

PRESIDENT WAPLES: That comes under "new business." The next report. Dr. MacCollum.

Report of the Committee on Public Policy and Legislation

DR. MACCOLLUM: The Committee on Public Policy and Legislation has no report at all to make at this time, this being an off year so far as the legislature is concerned, in the state. I understand that there are some other members who have something to say regarding some future legislation, but I don't know whether that is the part that has already been discussed, or not. I understood that Dr. McDaniel wanted to say something regarding it.

PRESIDENT WAPLES: You have heard the report of Dr. MacCollum. What is the wish of the Society?

DR. SAMUEL: I move it be accepted.

(The motion was carried.)

PRESIDENT WAPLES: I believe Doctor McDaniel has gone out. He is on the Nominating Committee.

DR. ———: Doctor Marshall probably can enlighten us.

DR. MARSHALL: Doctor McDaniel brought up the important points referring to the foreign doctor, and transferring from one state to another; another important point is that it is necessary to have more money for the Council of Medical Education to defray the absolutely necessary expenses. There isn't nearly enough there when you consider that eleven men have to be paid out of it for a large amount of work. Then there is the extra expense for licenses, correspondence, etc. It should be necessary for every man who comes in from another state to be investigated through the AMA and through the local place from which he comes.

Our law calls for men of sober mien, those who are not addicted to dope or liquor, who are gentlemen, who are residents of the United States—and a lot of things like that. We have no way to get data on those without enough money to do it.

PRESIDENT WAPLES: Doctor Marshall, I believe that comes under new business.

The next report is of the Committee on Hospitals.

Report of the Committee on Hospitals

DR. R. C. BEEBE: I want to apologize. For the last few years they have made a very detailed examination of all the hospitals and given a very good report. I apologize, but there has been no material change since the report last year.

PRESIDENT WAPLES: The Necrology Committee, Dr. Steele.

Report of the Committee on Necrology

DR. E. R. STEELE: I had to rely mostly on the State Medical Journal in compiling my report. I have the report here complete, which will take a little time to read, if you wish me to read it, or I will give you the names of the deceased members, and the date of death, and file my report—dispense with the reading of the report.

PRESIDENT WAPLES: It will be published, anyway. What is the wish of the Society?

DR. BIRD: Read the names; that will be sufficient.

DR. STEELE: Those whose obituaries I have are: William F. Haines, Seaford, November 29, 1935; Joseph M. Bastian, Wilmington, December 7, 1935; William P. Orr, Lewes, January 9, 1936; Joseph P. Wales, Wilmington, April 16, 1936; James Martin, Magnolia, May 25, 1936; Willard Springer, Wilmington, June 26, 1936, and Hugo L. Heitefuss, June 29, 1936.

As a eulogy to these deceased members I offer: "Tenuerunt Fidem, Euntur Sed Non Obliviscuntur."

DR. BIRD: I move we stand for a moment in silence, in memory of our departed members. (The House stood for one minute.)

PRESIDENT WAPLES: The report of the special committee from the Women's Auxiliary.

Report of the Women's Auxiliary

SECRETARY SPEER read the report as follows:

The Woman's Auxiliary to the Medical Society of Delaware extends greetings and best wishes to the Medical Society of Delaware for a successful and profitable meeting.

The Woman's Auxiliary has enjoyed a satisfactory year and is proud to report our organization has continued to make progress. We have held four meetings in the past year.

Mrs. Prentiss Wilson of Washington, second vice-president of the National Auxiliary, was our speaker at the state meeting last September.

We consider our outstanding event of the year was a tea held in February at the Academy of Medicine. The Auxiliary invited to this tea delegates from all clubs and organizations belonging to the City Federation of Women's Clubs. We hope by this tea to make contacts which may prove helpful in combating anti-medical propaganda in women's clubs.

A third meeting was devoted to Mr. Maybee who explained the purpose and organization of group hospitalization.

The Hygeia Committee has worked energetically to increase the sale of the Hygeia. A card party was given, and some of the proceeds will place Hygeia in four public institutions. In addition many private subscriptions have been secured. New subscriptions are always gladly received.

At the May meeting in Dover, our speakers were Dr. Morris and Mrs. Trent of the State Board of Health.

Our membership is represented in many public health and welfare societies. The Visiting Nurses' Association continues to have our interest as we meet every third Tuesday in the month to sew for this society. Several hundred garments have been turned over to the Visiting Nurses' Association.

We are still working on our membership drive and are gratified by a constant increase in numbers.

Our chief goal is to be an organization which the name implies, an auxiliary or "that which helps" to further the unselfish service and high ideals of the splendid men whose wives and relatives we are proud to be.

PRESIDENT WAPLES: You have heard the report. All in favor of its acceptance, please say "Aye". It is so ordered. Next, the report of the Committee on Cancer.

Report of the Committee on Cancer

SECRETARY SPEER read the report as follows:

Your committee has reviewed the cancer situation in Delaware, which shows that there is quite an active campaign starting for the control of cancer throughout the state. This is being done

by the Delaware State Committee of the American Society for the Control of Cancer.

Their objects are to be coincident with the objects of the American Society for the Control of Cancer, and in general to promote the work of the American Society in Delaware, and in particular "to collect, collate, and disseminate information concerning the symptoms, diagnosis, treatment and prevention of cancer; to investigate the conditions under which cancer is found and to compile statistics in regard thereto."

On this program there is a speakers committee and the chairman of this is a physician. It is the policy of the Delaware State Committee to have as speakers members of the medical profession who are especially qualified by their knowledge and experience, and ability to address lay groups in language which is at once authoritative, interesting, instructive, and understandable.

Physicians from each county will be enrolled as speakers in their respective communities, and the chairman of the speakers committee will be guided in the selection of such speakers by the medical members of the executive committee residing in the several counties of the state.

Members of the laity who are considered qualified to address lay audiences on any topic pertaining to the field of cancer control may also speak under the auspices of the Delaware State Committee, subject to the same conditions as above mentioned. Such speakers shall be directly responsible to the chairman of the speakers committee.

It will be the duty of the chairman of the speakers committee to see that those who are to speak under the auspices of the committee are provided with booklets and authoritative information concerning the purposes of the American Society for the Control of Cancer.

There is little that the Cancer Committee of the Medical Society of Delaware can do, except to cooperate and help this organization in their work.

Respectfully submitted,

G. C. McELPATRICK,
Chairman.

PRESIDENT WAPLES: You have heard the report. What is the pleasure of the Society? (Motion made and seconded, to accept the report, carried.)

We will have to skip the report of the Committee on Syphilis for the time being, as Dr. Vallett, I believe, is to report on that, and is out now on another committee. Next is the report on tuberculosis.

Report of the Committee on Tuberculosis

Last year your committee reported that during 1934 there were 152 deaths from tuberculosis in our state. I must report to you that during 1935 there were 155 deaths. However, this increase was due to an increase in population, and our death rate still remains about 62 deaths per 100,000 population. According to the National Tuberculosis Association there are 14 states that have a higher tuberculosis death rate than Delaware. A majority of these are southern states with a large negro population, or migratory states. Therefore, while Delaware does not occupy the worst position in the Registration Area, neither does it occupy as favorable a position as it should.

The rates for the three counties of Delaware present a picture which should act as a challenge to all agencies and individuals interested in the

ultimate control of this disease. For 1936 the records show:

	Deaths	Rate per 100,000
Wilmington	61	56.5
New Castle County	90	54.8
Kent County	33	101.5
Sussex County	34	73.2

Two deaths were of residents from outside the state.

Time permits but a cursory glance of the many activities carried on throughout the year by the various agencies of prevention and control. I shall list them under three heads: the State Board of Health, the Visiting Nurses' Association, and the Delaware Anti-Tuberculosis Society.

THE STATE BOARD OF HEALTH

The Tuberculosis Clinics are held periodically at three locations in Wilmington, four in New Castle County, three in Kent County and two in Sussex County. During the fiscal year ending June 30th, 1936, statistics of Brandywine Sanitarium are:

	No. Exams.		T. B. active		T. B. inactive		Contacts	
	New	Old	New	Old	New	Old	New	Old
White	485	847	56	85	—	183	118	466
Colored	185	672	22	87	2	128	92	335
	670	1519	78	172	2	311	210	801
Totals	2189		250		313		1011	

The tuberculin testing program is carried on in cooperation with the Delaware Anti-Tuberculosis Society. The Society furnishes the tuberculin used and the films for the x-raying of positive reactors. During the fiscal year, tuberculin testing was carried on at the clinics and in selected schools of the state as follows:

Number tested	1336
Number reacted	510
Per cent reacted	36.6
Number x-rayed	416

The Brandywine Sanitarium gives a ten-year summary of the discharged cases. For the past fiscal year 77 patients were admitted. The waiting list today is approximately 75. Soon after the first of next year it is expected that the new building, now nearing completion, will absorb the majority of these waiting cases.

A report from Edgewood Sanitarium, for colored patients, states that during the fiscal year 40 patients were admitted, with a waiting list at the present time of about 16.

The Director of Public Health Nursing has set up the following objectives in tuberculosis service:

To assist in case finding; to promote a program of early diagnosis; to assist in arranging medical supervision for all cases; to teach necessary care in the home; to teach the patient personal hygiene with emphasis on the importance of preventing infection from spreading to others; to assist in securing institutional care whenever possible; to follow up and supervise cases released from sanatoria; to keep all contacts under constant supervision, giving them instruction in personal hygiene; to assist in securing the reporting of all cases.

VISITING NURSES' ASSOCIATION

Tuberculosis nursing is undertaken by the Visiting Nurses' Association of Wilmington, in cooperation with the Delaware Anti-Tuberculosis Society. These two organizations maintain this service for indigent patients who are either awaiting hospitalization or for some reason must receive home treatment.

The director of the Visiting Nurses' Association in her report for the first nine months of this year states: "The bedside nursing given by the Association has shown a decided increase during these first nine months. It is obvious that more cases are being referred for care during the period of awaiting admission for sanitarium treatment. Also, we have had more terminal cases.

"It is definitely the function of the visiting nurse to get this type of case, and to be able to train the members of the family in the proper precautions to be taken to safeguard the other members of the family from the danger of the active case in the home. During the first nine months of this year 53 cases were dismissed. Nine hundred ninety-one nursing visits had been made. The nurses have also made 125 tuberculosis welfare, or instructive, visits."

THE DELAWARE ANTI-TUBERCULOSIS SOCIETY

In addition to cooperative nursing and tuberculin testing, on which I have reported briefly, this Society maintained its health education service to the schools of this State. There were 440 schoolrooms that used this health material, including health charts, height and weight graphs and supplementary health literature. More than 14,000 school children were enrolled. This service is carried on with the approval of the State Department of Public Instruction and functions through the Department of Physical and Health Education.

During the year, the Delaware Anti-Tuberculosis Society has distributed thousands of pieces of literature on tuberculosis, stressing early diagnosis. Exhibits were held at several schools and at the Kent-Sussex County Fair. Also lecture and health motion picture service was used by 48 different groups.

During the past fiscal year the Society's Pre-ventorium, Sunnybrook Cottage, cared for 41 children.

I found that these three agencies cooperate with each other to the fullest and there is little or no duplication of effort.

It is a source of great pleasure to the committee and all interested in anti-tuberculosis work to note the splendid cooperation we have had from all the physicians of the state. They have rendered an individual and special service to this great cause.

In conclusion, your committee recommends that, inasmuch as tuberculosis is now conceded a controllable disease, the Legislature be requested to grant an appropriation sufficient to carry on an adequate program that will place Delaware among the leading states in the fight against tuberculosis.

Respectfully submitted,

MEREDITH I. SAMUEL,
Chairman.

PRESIDENT WAPLES: You have heard the report. What is the pleasure of the Society?

(It was duly moved, seconded and carried that the report be accepted.)

PRESIDENT WAPLES: What is the pleasure of the Society with reference to this clause: "In conclusion, your committee recommends that, inasmuch as tuberculosis is now conceded a controllable disease, the Legislature be requested to grant an appropriation sufficient to carry on an adequate program that will place Delaware among the leading states in the fight against tuberculosis"?

DR. SAMUEL: I move it be referred to the Legislative Committee.

(The motion was duly seconded and carried.)

PRESIDENT WAPLES: The report of the Committee on Medical Economics: Doctor Springer.

Report of the Committee on Medical Economics

SECRETARY SPEER: We haven't any report.

PRESIDENT WAPLES: The report of the Committee on Criminology.

Report of the Committee on Criminology

SECRETARY SPEER read the report as follows:

For the last four years the Committee on Criminology has presented a complete report on crime in general, with concrete recommendations in regard to the criminals in this state. The recommendations were:

The committee feels that the medical profession of Delaware should be more interested in the prevention of crime rather than in the treatment. Therefore, it recommends to have a closer co-operation between the public educational system, judicial system, bar association, organized social workers, and the medical profession. To find better methods for rehabilitation of delinquent children, to establish better environment for the vast majority of children who are in unhealthy and inhuman environment, to have adequate forces in organization for prevention of crime, for studying each individual delinquent child.

As to care and treatment of criminals in this state, the committee finds that in the last few years the state courts have endeavored more and more to give each criminal a fair trial. Many doubtful cases have been referred to the mental hygiene clinic and state psychiatrist, to have complete examination and prolonged observation before presenting the cases. The office of the Attorney-General has been very cooperative in this procedure. The committee hopes that the courts of the state of Delaware will take the same stand as the courts of many states, especially the state of New York, that no case of felony should be tried in the courts unless there is a complete social, psychological and psychiatric report.

The committee recommends to request the legislature to appropriate sufficient funds to survey this state in regard to delinquency and present definite plans for the prevention of delinquency.

The committee recommends to request the Bar Association of Delaware to appoint a committee of three, representing each county of the state, who, jointly with the committee from this Society, will continue the efforts in studying the question of crime.

The above-mentioned reports were received and filed by the Society. Last year for the first time the Society has endeavored to have some contact, officially, with the Bar Association, apparently without any result. The committee wishes to beg the Society to make all efforts to carry out such recommendations as have already been made.

The section on Forensic Psychiatry and Conduct Disorders of the American Psychiatric Association, of which the chairman of your committee is a member, is endeavoring to have closer co-operation between the members of the Medical Association and the Bar Association, for creating new laws for the prevention of crime.

The committee is urgently requesting the Society to authorize the President to make use of the recommendations made by the committee, in the coming year, as the question of crime is one of the most important factors in the life of the community.

Respectfully submitted,

M. A. TARUMIANZ,
Chairman.

PRESIDENT WAPLES: You have heard the report. What is the pleasure of the Society?

DR. BIRD: I move the report be adopted and the legislation referred to the Legislative Committee.

SECRETARY SPEER: Let's discuss it; I read it too fast.

DR. MULLIN: Who signed that report?

SECRETARY SPEER: Doctors Davies, Wilson and Tarumianz. Gentlemen, there are a lot of things here we are recommending that we are not going to carry out. It is just foolishness to pass all this when you know you are not going to do it. Why should we recommend the legislature to appropriate sufficient funds to survey this state in regard to delinquency? I mean, why should that come from the Medical Society of Delaware?

DR. BIRD: On the other hand, I mean why not? Who else is better qualified to speak of the medical aspects of delinquency?

SECRETARY SPEER: It is not taking up the medical aspects.

DR. SAMUEL: Mr. Chairman, was that motion carried?

PRESIDENT WAPLES: No, not yet.

SECRETARY SPEER: There are a lot of recommendations in here it just seems to me are not in keeping.

DR. BIRD: Read us the recommendations.

DR. CHIPMAN: I think the proper place to dispose of that would be in the legislative committee.

SECRETARY SPEER: I think it is up to the committee itself to do these things. I will tell you why I say that. These recommendations have come in to the Society year after year and they have all been passed; nothing has been done. Last year I wrote, as it says here, to the Bar Association; they disregarded it; they didn't even pay any attention to the letter, until Dr. Tarumianz got after Mr. Muncy Keith, and after looking at it he said, yes, he did get the letter; and I believe he found it. Now I knew this was coming up because last year we made just the same kind of a recommendation; the committee recommends to request the Bar Association to appoint a committee of three, representing each county of the state, who jointly with the committee from the Society will continue the efforts and study the question of crime. We passed the whole works. I have personally contacted several members of the Bar Association, and you get absolutely no effort of cooperation on their part; they don't seem to want to bother with it.

Now then, in my opinion, it is up to this committee that is appointed to do all of this, and then bring us back a report of what has been done. Now, I may be all wrong; maybe I am out of step.

DR. CHIPMAN: The function of that committee is to get up a report, and recommend to this body, and we in turn recommend, or adopt their recommendations and turn it over to the proper authorities which have the power, legal power, to go ahead with it; that would be the legislative committee.

SECRETARY SPEER: But the committee makes these recommendations; I as secretary write and get no cooperation, no answer at all.

DR. MARSHALL: They should make up —

SECRETARY SPEER: The committee themselves should contact this bar association and get their views first. The committee doesn't do anything but sit down and write some recommendations; they don't do any work on it at all.

DR. CHIPMAN: I suppose that has been done by the committee already.

SECRETARY SPEER: I can't see it that way.

DR. BIRD: Mr. Chairman, the motion was that the report be adopted and the recommendation

be referred to the legislative committee. I had in mind, of course, the recommendation asking for sufficient funds to carry out this psychiatric survey, I believe.

The rest of the work would naturally, should naturally, be referred back to this committee to continue to function. I agree with you in that.

DR. MULLIN: Don't they have sufficient psychiatric survey?

DR. BIRD: I don't believe they have enough funds to make a psychiatric survey of the juveniles of this state, and we all agree it is a fundamentally important thing to get, especially in the mentally subnormal group.

SECRETARY SPEER: If this were the first year it came up, but it came up when I was president, and every year since I have been secretary; the same thing when Dr. Tomlinson was on last year; just a repetition year after year, and we haven't done anything, we haven't gotten anywhere with it in the last five or six years.

DR. SAMUEL: Question.

PRESIDENT WAPLES: You have heard the motion, and it has been seconded; now what is your pleasure?

(The motion was carried.)

PRESIDENT WAPLES: The report from the Delegate to the American Medical Association.

DR. ———: Dr. Vallett's report comes in first.

PRESIDENT WAPLES: I beg your pardon, you are right. Dr. Vallett.

Report of the Committee on Syphilis

The most conspicuous happening in the field of syphilis control during the past year has been the increased activity of the U. S. Public Health Service in reaching out to the individual state health boards, enabling the latter to increase their personnel. These extra workers have been engaged in looking up contacts and investigating the families of those patients attending the state clinics. The money used to pay these workers is derived through a Federal grant under the Social Security Act. A part of this money has been set aside for clinic chiefs; however, while some of the chiefs have accepted it others have rejected it.

The medical head of the Du Pont Company states that he is seriously considering the treatment of all his company's syphilitics.

A brief discussion of the above facts is herewith set forth.

If the ultimate control of syphilis is in the hands of the general practitioner, then the addition of increased personnel in the form of nurses bringing cases to the clinic is in direct competition with the family physician. Would it not be better for this same personnel to assist the family physician with the same type of service?

Let the clinic become a place for consultation and for the teaching of physicians. Let the physician decide which case is to be sent to the clinic, but let him still retain the final disposition of the case. In this manner the clinic would then become the servant and helper of the physician, but do not let him abuse it.

When a medical head of an industrial concern expresses a desire to treat his company's syphilitics, what about the general practitioner then? What is the difference between this and state medicine? It is worse, because it brings a medical problem under commercial control.

If the regular medical profession is to take command of this situation, each one individually must wage an intensive campaign in holding his

syphilitics, giving them the same care and consideration as any other medical case.

All of us have been too apathetic and disinterested in the past, and have thought of syphilis as a scourge to be borne, rather than eradicated.

"The syphilitic does not need state medicine; he needs us."

Respectfully submitted,
BRICE S. VALLETT,
Chairman

Mr. President, we made a little departure this year from our usual report on syphilis. Heretofore we have discussed the advisability of detecting the early sore and the treatment of the pregnant woman. This year, as I say, we have departed a little from that.

PRESIDENT WAPLES: You have heard the report.

DR. MULLIN: I would like to say a word in regard to that report. I think Dr. Vallett is right. I had a patient, the chief telephone operator at a local hotel, and had her Wassermann taken, as the manager required everybody working at that hotel to have a Wassermann taken. I won't mention names at all, but the report came back from a certain laboratory that the Wassermann was positive. I sent her to the Delaware hospital; her Wassermann there was always negative.

What they were going to do was to discharge the girl. I then sent the blood to a private laboratory in Philadelphia, also to the University of Pennsylvania, to the Jefferson Hospital, and to Johns Hopkins in Baltimore. All these reports came back negative. I am very firm in my belief that somebody is not practicing medicine like you and I would like medicine practiced; maybe I am wrong. I say that that young girl would have lost her job, and I think we ought to do something about it.

DR. BIRD: Mr. Chairman, I hope you will excuse me for speaking again. This report is the best report the Committee on Syphilis has ever brought in; it is more social and more economic, which for the time being is the more important. The crux of the whole thing, of course, is corporate practice of medicine. During the prohibition era Congress presumed to say that we could prescribe only one pint of whiskey to a patient for bona fide illness; one pint per ten days. That was setting up a limit to therapeutics. When the case got before the Court on its merits it was thrown out; that clause was declared unconstitutional, for the United States Supreme Court has decreed that neither the Congress, nor the separate states, nor any subdivision thereof, nor any corporation thereunder, can practice medicine.

A few months ago a case was brought up in the state of California involving the same thing. A little bit later the United Medical Service, or whatever they call it, in Chicago, came under the ban of the courts in similar fashion. Coming back to the local situation, every practitioner in Wilmington remembers that when the present medical director of the company referred to came to the town he promised and agreed that he would not indulge in the practice of medicine through his corporation. We have heard one citation to-night already. Everybody here could mention others in which this medical department is practicing medicine. Only the other day I personally ran into a fellow who had to be operated on in a distant state. He had an acute ruptured appendix, and came home still requiring surgical dressings; those dressings are being made in the medical office of the company.

If any corporation is going to use their medical department to give a medical or surgical service

gratuitously to men with incomes of \$5,000 or \$6,000 and more, what is the general practitioner going to have left after a while? I am asking you a serious question, one that requires serious thought. I would recommend that this phase of this report, which so far is the most important thing presented here tonight, be brought to the special attention of the Committee on Medical Economics.

PRESIDENT WAPLES: You have heard the motion.

DR. BIRD: That is just a discussion.

PRESIDENT WAPLES: You have heard the motion on the paper. What is your pleasure?

(It was voted, upon motion duly made and seconded, that the report be accepted.)

PRESIDENT WAPLES: We will now hear the report of the delegates to the American Medical Association.

Report of Delegate to A. M. A.

Members of the House of Delegates: The 87th Annual Session of the American Medical Association was held at Kansas City, Missouri, May 11-15. The House of Delegates convened in the Ballroom of the Hotel Muehlebach and was called to order by the Speaker, Dr. Nathan B. Van Etten.

Following the address of the Speaker, the address of President James S. McLester was heard, in which he stated, "The attitude of the American Medical Association, as in the past, should be one of close attention to the medical needs of the American people and of alert preparedness to meet these needs."

The message from President-elect J. Tate Mason was read by Dr. Brien T. King. Dr. Mason stated, "The medical profession may rest assured that its future depends on the defeat of the present trend toward general socialization and the maintenance in America of at least a moderate individualism."

A great deal has been said and volumes have been written about what physicians should do in regard to issues as they arise, but I feel that Dr. McLester and Dr. Mason have indicated clearly in the above statements the course that we should pursue.

The reference committee, in commenting upon the report of the Secretary, Dr. Olin West, paid him the following beautiful tribute, "Olin West—who hears or thinks of this name without a feeling of well-being?—that genial gentleman, courteous, explicit, kindly and truthful, with but one thought, the interest of our association. You may mark his grave with a monument, you may decorate his shirt-front with a medal, we don't know, but we do know that any recommendation that can be put into words, of which we are scarcely capable, this house would rise in acclaim." The House then rose as a token of respect and regard for Dr. West.

The committee to study contraceptive practice and related problems made an excellent report, but it considered its report as necessarily incomplete. It recommended that a committee be appointed to continue a study of birth control and to report further to the House of Delegates. This recommendation was adopted.

The election of officers resulted as follows:

President-elect, Dr. J. H. J. Upham; Vice-President, Dr. Charles Gordon Heyd; Secretary, Dr. Olin West; Treasurer, Dr. Herman L. Kretschmer; Speaker of the House of Delegates, Dr. Nathan B. Van Etten; Vice-Speaker of the House of Delegates, Dr. H. H. Shoulders.

Since the convention was held you are all aware that the sad death of our President, Dr. J. Tate Mason, has occurred.

Atlantic City and Philadelphia extended invitations to hold the convention there next year; Atlantic City was decided upon by the very close vote of 70 to 69.

The weather was cool and clear during the whole period of the convention, and the excellent facilities of the large, new auditorium helped to make it one of the most successful conventions ever held.

In conclusion I wish to thank you for the honor and privilege of again serving as your Delegate.

Respectfully submitted,

C. E. WAGNER.

PRESIDENT WAPLES: You have heard the report of Dr. Wagner. What is the pleasure of the Society?

(It was voted upon, motion duly made and seconded that the report be adopted.)

PRESIDENT WAPLES: Next is unfinished business.

SECRETARY SPEER: The Secretary hasn't any unfinished business, Mr. President.

PRESIDENT WAPLES: Is there any new business?

Committee on Medical Practice Act

DR. MCDANIEL: I suggest a committee be appointed by the President to revise the present state medical laws. Do you want me to make a motion? I will make a motion that the President appoint a committee of three to revise the present state medical laws.

DR. SAMUEL: I second the motion.

PRESIDENT WAPLES: Is there any discussion? All in favor please say "Aye"; opposed. The motion is carried.

I will appoint Dr. Bird, Dr. McDaniel and Dr. James Beebe as a committee. Is there any other new business?

Miscellaneous

DR. SAMUEL: Mr. President, I move that the program of the Scientific Committee be approved.

PRESIDENT WAPLES: Is there a second to the motion?

(The motion was seconded, put to a vote and carried.)

PRESIDENT WAPLES: Now, the meeting place for next year. Is there any suggestion for a meeting place next year?

SECRETARY SPEER: The meeting place next year is New Castle County.

DR. MARSHALL: It alternates between lower counties and Wilmington each time.

PRESIDENT WAPLES: But what place in New Castle County? Have you any suggestions?

DR. ———: I move it be held in Wilmington.

PRESIDENT WAPLES: You have heard the motion that the next meeting be held in Wilmington. Is there any second to the motion?

(The motion was seconded, put to a vote and carried.)

Report of the Nominating Committee

We beg to submit the following nominations:

First vice-president, Dr. Roscoe Elliott, of Laurel.

Second vice-president, Dr. C. G. Harmonson, of Smyrna.

Secretary, Dr. William H. Speer, of Wilmington.

Treasurer, Dr. A. Leon Heck, of Wilmington.

Councilor, Dr. William Marshall, of Milford.

Delegate to the A. M. A., Dr. Stanley Worden, of Dover. Alternate, Dr. James Beebe, of Lewes.

Committee on Scientific Work: Dr. U. W. Hocker, of Millville; Dr. I. J. McCollum, of Wyoming; and Dr. W. H. Speer, of Wilmington.

Committee on Public Policy and Legislation: Dr. Sam Marshall, of Milford; Dr. T. H. Davies, of Wilmington; and Dr. H. M. Manning, of Seaford; plus the President-elect and the Secretary-elect.

Committee on Publication: Dr. W. E. Bird, of Wilmington; Dr. M. A. Tarumianz, of Farnhurst; and Dr. W. H. Speer, of Wilmington.

Committee on Medical Education: Dr. Roger Murray, of Wilmington; Dr. Stanley Worden, of Dover; and Dr. E. L. Stambaugh, of Lewes.

Committee on Hospitals: Dr. James Beebe, of Lewes; Dr. W. E. Bird, of Wilmington; and Dr. H. V. P. Wilson, of Dover.

Committee on Necrology: Dr. O. V. James, of Milford; Dr. J. D. Niles, of Townsend; Dr. W. T. Jones, of Laurel.

For the Board of Medical Examiners: the present board, Dr. J. S. McDaniel, of Dover; Dr. T. H. Davies, of Wilmington; Dr. Olin S. Allen, of Wilmington; Dr. John H. Mullin, of Wilmington, and Dr. William Marshall, of Milford; Dr. W. Allenbach, New Castle County; Dr. Roscoe Elliott, of Laurel, and Dr. C. J. Prickett, of Smyrna.

SECRETARY SPEER: The law says we must present ten. Mr. President, I have a report here of the Delaware Academy of Medicine. (Read the following report):

Report of Representative to D. A. M.

Medical Society of Delaware, Gentlemen,—The work of the Scientific Committee in arranging lectures during the past year is worthy of especial mention.

On January 9th, Dr. Leonard G. Rowntree, director of the Philadelphia Institute for Medical Research, lectured on "Research on Pineal and Thymus Glands." On March 13th Dr. Emil Novak, of Baltimore, lectured on "The Endocrinology of the Female Reproduction Cycle," and on April 10th Dr. George Crile lectured on the "Genesis and Surgical Treatment of Essential Hypertension."

In addition to the above special lecturers, Drs. Robinson and Miller of Philadelphia gave lectures once a month and showed pathological and x-ray specimens to illustrate the subjects under discussion.

There has been a steady increase in the use of the library during the past year. The library collection now consists of 2500 volumes, and 115 current medical and dental journals are received regularly. Several new books and journals will be added during the coming year.

We make frequent use of inter-library loans for reference material which our library does not have, as we are able to borrow promptly from larger libraries in Philadelphia, New York, and Washington. Thus, while our actual number of volumes on hand is limited, yet through the privilege of borrowing from other libraries when necessary, our resources are practically unlimited.

Bulletins have been mailed to all Delaware physicians and dentists during the past year to help acquaint members and friends with the facilities of the library.

The library is open from 10 a. m. to 5 p. m. daily, from 10 a. m. to 12 noon on Saturdays, and also on the evenings of meetings.

Whenever any out-of-town physicians and den-

tists are in Wilmington you are cordially invited to visit the library.

Respectfully submitted,
W. O. LA MOTTE.

PRESIDENT WAPLES: Dr. Vallett, have you made the additional selections?

DR. VALLETT: The name of Dr. Robert Tomlinson, of Wilmington, and Dr. William T. Chipman, of Harrington.

PRESIDENT WAPLES: You have heard the report of the Nominating Committee. What is the pleasure of the Society?

DR. SAMUEL: I move the report of the Nominating Committee be accepted, and the Secretary cast the ballot.

PRESIDENT WAPLES: Is there a second?

DR. I. L. CHIPMAN: I second the motion.

(The motion was put to a vote and carried.)

SECRETARY SPEER: I have one communication, Mr. President, from the Baltimore Medical Society.

(Secretary Speer read the communication—an invitation to attend the meetings of the Southern Medical Association.)

DR. BIRD: The S. M. A. extends a cordial invitation to all white physicians to attend their convention next month.

PRESIDENT WAPLES: Is there any other miscellaneous business?

DR. BIRD: I move that the expenses of this convention be ordered paid.

(The motion was duly seconded, put to a vote and carried.)

PRESIDENT WAPLES: If there is nothing further, we stand adjourned.

The meeting thereupon adjourned at 10:30 p. m.

CONFERENCE OF STATE SECRETARIES AND EDITORS

The Annual Conference of Secretaries of Constituent State Medical Associations was held in the American Medical Association Building, Chicago, November 16 and 17.

The program, excellent in all its details, was as follows:

Monday, November 16, 10 A. M.

Call to Order. Rock Sleyster, Chairman of the Board of Trustees of the American Medical Association.

Address. Charles Gordon Heyd, President of the American Medical Association.

Basic Science Laws. Mr. J. W. Holloway, Bureau of Legal Medicine and Legislation, American Medical Association.

The Michigan Filter System. L. Fernald Foster, Secretary of the Michigan State Medical Society. The Public Health League of California. Glenn Myers, Los Angeles.

12:30 P. M. Luncheon.

Monday, November 16, 2 P. M.

Address, J. H. J. Upham, President-elect, American Medical Association.

The United States Public Health Service and the Social Security Act. Thomas Parran, Surgeon General, United States Public Health Service.

The Children's Bureau and the Social Security Act. Miss Katharine F. Lenroot, Chief, Children's Bureau, United States Department of Labor.

Practical Hints on the Preparation of Manuscripts and Illustrations. Richard M. Hewitt, Rochester, Minn.

Monday, November 16, 6.30 P. M.

Dinner Conference of Editors of State Medical Journals. Holman Taylor, Secretary-Editor, State Medical Association of Texas, presiding.

Tuesday, November 17, 9.30 A. M.

Insurance Against Alleged Malpractice. Mr. Thomas V. McDavitt, Bureau of Legal Medicine and Legislation, American Medical Association.

The Scientific Exhibit at Annual Meetings of State Medical Associations. Thomas G. Hull, director, Bureau of Exhibits, American Medical Association.

Referred for Discussion by House of Delegates

Consultation and Correspondence with Bureau of Legal Medicine and Legislation.

Violation of Laws Pertaining to Narcotics.

The sessions were the first to be held in the beautiful new auditorium on the roof of the remodeled A. M. A. building, to which two additional stories have been added, and the entire building recovered with Indiana limestone.

The papers read, and their discussions, will be published in the new *Supplement to the Journal of the A. M. A.*, a new journalistic feature of the organization, which will appear shortly and which will replace the discontinued *Bulletin of the A. M. A.* Our members are urged to read these articles, and to preserve their *Supplements*.

Our Blue Cover

At the Chicago Conference a display was made of all the state journals. Among these the *Delaware State Medical Journal* was conspicuous in its solo role—the blue cover, and many inquiries were directed towards your Editor as to the why and wherefore.

We explained that it had an old and historic origin. Col. Caldwell, of Sussex County, a noted cockfighter in Revolutionary days, maintained that no cock was a real fighter unless its mother was a blue hen. The Delaware troops proved themselves such valiant fighters that they began to be called the Blue Hen's Chicks. THE JOURNAL, therefore, proudly appears garbed in its historic blue, for it, too, is fighting valiantly for the best interests of the Delaware profession and its public.

Timely Brevities

Comparatively few physicians accumulate much wealth by their labors alone, although they may at times work twenty-four hours a day. Those most favored by fortune's smile have been the few who made fortunate investments. It is a well known and accepted fact that doctors occupy a very prominent place on sucker lists. The reason for this is the desire of hard-working doctors to take a short-cut to financial security. But the average physician does not have the business training nor the time to investigate and direct his investments properly. He, therefore, leaves this for others to do and only too often with disastrous results.

The following was gleaned from *The New York Medical Week*, and we pass it on to you:

"He died at 3:40 this afternoon. . . . Two nights ago a frantic young lady insisted that I come right down to see him . . . 'Dr. X. M. D.' read the sign in his dusty window. . . . The narrow, black hole that served as his office, sickened me with its dreadful hopelessness and

poverty. . . . The cheap little desk, two broken chairs, an ancient examining table, books, books, books everywhere, pitifully cheap rugs covering a dirty floor.

"In a mid-room, a junky brass bed. . . . A colorless, raggy blanket covering a giant of a man, drooling, whispering a 'Hello!' Eighty years old. . . . Fifty-one years a physician. . . . Formerly editor of this and that. . . . Reads and speaks six languages fluently. . . . Until ten years ago a successful practitioner. . . . 'If I could collect half of what folks owe me, I'd be a rich man. . . . The beginning of the long and yet short road to failure. . . . Frantic but futile efforts to regain a foothold. . . . A short trip to the mid-West, back to Brooklyn, Long Island, New York. . . . Hopeless. . . . His present office and home in a dirty tenement for \$30 a month. . . .

"Life is ebbing. . . . cardiac and general debility. . . . forty-eight hours alone in this dive. . . . niece drifts in by accident. . . . I phone Mt. Sinai—he lives within two blocks of this richly-endowed hospital—I carefully explain the circumstances, the extreme poverty, the dire need of hospitalization and nursing to the admitting office. . . . He is sorry but his 'medical wards are all filled.' . . . No place for an old doctor. . . . Mount Sinai getting millions of dollars worth of free service from doctors but can't spare a cot for a man who has given fifty years to the service of humanity. . . . 'Sorry. . . . I am a bit dazed. . . .

"The stationery store man suggests. 'Call up police for an ambulance!' When the Flower Hospital 'Bus' arrives, I repeat my story. . . . The young interne is compassionate but, 'He has no money?' . . . 'No he has no money. . . . Time out while we ruminate. . . . 'I'll take him to Bellevue, if you will give me an admission. . . . It is a long trip for the old fellow, but Mt. Sinai and Flower have no room for a poor old doctor. . . .

"Thank God for Bellevue. . . . there is always room for one more, high or low. . . . rich or poor. . . . ditch-digger or doctor. . . . Some hours, and peacefully and mercifully comes the end. . . .

"Am I my brother's keeper?" Yes, I am, and you are! It is shameful that in an organization comprising 140,000 men, a brother physician should be permitted to die in poverty and misery and when in dire need to be told, 'Our medical wards are full!' Can't we put hearts into the marble edifices of Mt. Sinai and Flower and all the other hospitals whose 'wards are all filled up' for our brother physicians who 'have no money!'

"Peace be with you, old friend! In life we failed you. . . . in death we'll send you flowers. . . .

God speed the day when no doctor with a long record of honorable medical service shall be permitted to be in want or to accept charity!

Med. Searchlight, Nov., 1936.

Restoration of Orbit and Repair of Conjunctival Defects With Grafts from Prepuce and Labia Minora

Grady E. Clay and J. Mason Baird, Atlanta, Ga. (*Journal A. M. A.*, Oct. 3, 1936), state that grafts from the prepuce and labia minora have not heretofore been used for conjunctival grafts and it is the ideal tissue as a substitute for conjunctiva. There is plenty of tissue available for such grafts and it has all the appearance of perfectly normal conjunctiva a very short time after it has been

grafted. The graft from this source is very thin and contains no hairs and very little subcutaneous fat. It has a pinkish color and can easily be cut to fit the area desired. The mucous membrane of the vestibule of the vagina (between the inner margins of the labia minora and the outer margin of the hymen) is smooth, glistening and devoid of glands and of hair follicles. Such a graft is easily obtained from this region of the female external genitalia, and subsequent healing leaves no deformity. The skin from the prepuce is obtained by a circumcision, special care being used in the preparation, and as much as possible of the inner surface being employed, for here the skin is much more like mucous membrane.

Offices For Rent

The very desirable offices of the late Dr. Joseph P. Wales, at Delaware and Woodlawn avenues, Wilmington, are available for rent by a physician. This is an excellent location and offers unusual opportunities. If interested, dial Wilmington 8933.

BOOK REVIEWS

Applied Dietetics. By Sanford Blum, M. D., Head of the Department of Pediatrics, San Francisco Polyclinic and Post-Graduate School. 1p, 408. Cloth. Price, \$4.75. Philadelphia: F. A. Davis Company, 1936.

Dr. Blum's book is indeed a masterpiece in dietetics. Practically every diseased condition wherein careful dieting is indicated is thoroughly covered, giving the general rules and explanations in detail.

The chapter on colitis should appeal to every physician, as this is a very common condition. Here in one chapter, Dr. Blum has given a very thorough regime, which is intensely practical and quite easy to follow. Diets are arranged for each type of individual, with due consideration to age, occupation, etc.

The second section deals with infants and children in health and disease, and contains much valuable information in concise, compact form. It is indeed a splendid reference work for the pediatrician.

We believe this to be one of the most practical books on dietetics now available.

A Diabetic Manual. By Edward L. Bortz, M. D., Associate Professor of Medicine, Graduate School, University of Pennsylvania. 1p, 222. Cloth. Philadelphia: F. A. Davis Company, 1936.

Another book intended as a manual for diabetic patients, representing no addition to the general run of such books; too technical for the average patient and not technical enough for the average physician. It presents no advantage over any similar book of this type. There is an obvious effort on the part of the contributing authors to talk down to the patient without ever actually reaching or maintaining this point. This is especially evident in the chapter on diabetic surgery. It is no better and no worse than the average manual, and has nothing especially to recommend it.

THE JOURNAL

wishes its friends and readers

A MERRY CHRISTMAS

and

A HAPPY NEW YEAR

EDITORIAL

DELAWARE STATE MEDICAL JOURNAL

Owned and published by the Medical Society of Delaware. Issued about the twentieth of each month under the supervision of the Publication Committee.

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Local news of possible interest to the medical profession, notes on removals, changes in address, births, deaths and weddings will be gratefully received.

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VOL. VIII DECEMBER, 1936 No. 12

WE BECOME OF AGE

With the current edition of THE JOURNAL the present editor completes his twenty-first year of service. Many of our older members will recall the first issues, which appeared in 1910, with Dr. Harold L. Springer as editor and Dr. Joseph W. Bastian as business manager. This was a monthly of four to eight pages. In 1914 Dr. Springer was succeeded as editor by the late Dr. Albert Robin, and by this time THE JOURNAL had grown to 16 to 20 pages, but still retained its pamphlet size. In January, 1916, the present editor became the acting editor, assisting Dr. Robin, who wished to be relieved of this task. In April, 1916, Dr. Robin retired from the editorship, and the duty of carrying on Delaware's medical journal fell upon our shoulders, where it has since remained.

Due to the stress of war times THE JOURNAL was published as a quarterly from January, 1918, to December, 1922. Following this, the Delaware journal was combined with the Pennsylvania journal and published again as a monthly under the title of the *Atlantic Medical Journal*, with Dr. Frank C. Hammond, of Philadelphia, as editor and the Delaware scribe as assistant editor. The business details were conducted by our Pennsylvania confreres entirely, Dr. Bastian severing his connection with our journal in December, 1922. The hopes of the two states in merging their journals—that the *Atlantic* might become the organ of several nearby states—did not materialize, and the arrangement was cancelled with the issue of September, 1928, each state having decided to resume publication of its own journal under the original titles.

Thus a new series of the DELAWARE STATE MEDICAL JOURNAL began in January, 1929, with the old Delaware editor back on the job, assisted by Doctors W. O. LaMotte and M. A. Tarumianz, who has also served as business manager. Dr. Tarumianz continues his services as business manager, but in January, 1934, Dr. LaMotte, whose services were ex-officio, was succeeded by Dr. W. H. Speer, the new secretary of the Society.

The new journal conforms in style and format to the other state journals: we are trying to make it compare favorably with them in interest and value, but to do this is not always as easy as it sounds, due chiefly to the limited membership of the Medical Society of Delaware, and to the absence in this state of any institution of medical teaching and research. Thus our resources are limited at the very outset, and not all of these twenty years in the harness can be described as a pathway of roses. However, the prick of the thorn only makes us notice all the more the beauty of the petal, and thus encouraged we shall continue our endeavors to help Delaware find its place in the medical sun. We can succeed in this attempt only if all our members will continue to give us their sympathetic support.

DELAWARE STATE MEDICAL JOURNAL

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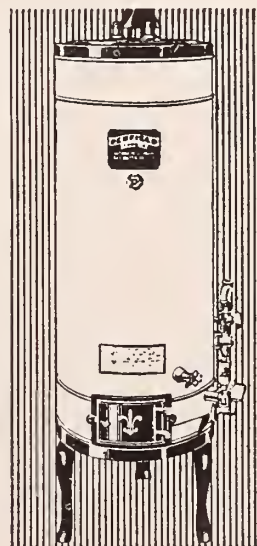
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